Electronic Filing System

Introduction

Version 4.1

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INTRODUCTION

EFS Purpose

The purpose of the Electronic Filing System (EFS) is to electronically file specific types of patent application related submissions with the USPTO via the Internet. EFS users must be identified as one of the following authorized patent application filers:

- Applicant
- Assignee
- Assignee undivided part as set forth in 37 CFR 1.33 (b)
- Registered Attorney or Agent

EFS is a system for submitting new utility patent applications, provisional patent applications, assignment documents, publication-ready application information for pre-grant publication, and computer readable format (CRF) sequence listings for pending biotechnology patent applications as described in the Manual for Patent Examining Procedure and 37 CFR 1.821-1.825.

The legal framework for using this system can be found as a link on the EFS web site, www.uspto.gov. For Patent Business Rule references please see the Manual for Patent Examining Procedure at www.uspto.gov.

EFS use is based on Patent business rules and statues. A new utility patent application is one that is being originally filed electronically. All applications filed after November 29, 2000, are subject to the pre-grant publication rules. See 37 CFR 1.211 to 1.221. The electronic filer will indicate how the application will be published (i.e. early, at 18-months, or not at all) during submission of the electronic application. EFS applications are assigned a filing date, an application number, and entered into the normal paper-based flow of examination after being printed in a standard format.

A pre-grant submission is a submission of a copy (possibly amended or redacted) of an application specification already filed at the USPTO, together with patent application information that will be published along with the specification. The pre-grant submissions will be published, but will not be entered into the examination process.

To electronically file a pre-grant publication submission the applicant should already have a filing date, application number and confirmation number. The amendments or modifications that appear in these submissions are not automatically made in the corresponding application file at the USPTO. These amendments must be submitted to

USPTO in paper according to conventional procedure. Please refer to the American Inventors Protection Act of 1999 at www.uspto.gov.

Overview of EFS Software

EFS provides patent applicants and practitioners with software capabilities and technical guidance to electronically author patent application information for submission to the USPTO via the Internet.

EFS is comprised of two software components: 1) authoring software that complies with USPTO business rules and electronic data capture standards; and 2) submission software that creates forms, validates, bundles, compresses, and securely submits the electronic application files and information.

USPTO makes available at no cost the EFS authoring and submission software. To author your specification document you may use the preferred authoring tool known as PASAT (Patent Application Specification Authoring Tool). PASAT uses the MS-Word environment to author the specification document. USPTO also makes available WordPerfect Template for Specification Authoring (TSA).

The submission software is called the electronic Packaging and Validation Engine (ePAVE). It is used to create forms and submit the electronic application information. After successful transmission, the software returns an acknowledgement receipt that includes the date of receipt at the USPTO and an assigned patent application number.

EFS implements Patent business rules and practices using Internet technologies. The Extensible Markup Language (XML) is one of the technical standards that is implemented. Applicants author their patent application specifications off-line as intelligent, tagged, electronic documents using XML. Using ePAVE applicants author other patent application information as XML forms.

The Extensible Markup Language is a non-proprietary standard approved by the World Wide Web Consortium (W3C). XML is a format used for exchange of information between different automated applications. Because the data is tagged, it can be passed intelligently from one system to another. In addition it will allow USPTO to publish pre-grant publication submissions without having to re-key the information. USPTO EFS software automatically tags the patent application specification and other related application information.

What You Should Know About EFS

- USPTO customer number and digital certificate must be obtained prior to using the EFS software.

- When you file electronically, you can pay fees using either a USPTO deposit account or bankcard (i.e. credit card).

What EFS Supports

EFS supports electronic filing of these new utility patent application parts: specification, computer readable form (CRF) biosequence listing text files, computer program listing text file appendices, large table text file appendices, declaration, power of attorney, application transmittal, fee transmittal, application data sheet, small entity statement, and assignment recordation.

EFS supports electronic filing of provisional patent applications including a specification, computer readable form (CRF) biosequence listing text files, computer program listing text file appendices, large table text file appendices, declaration, power of attorney, application transmittal, fee transmittal, small entity statement, application data sheet, and assignment recordation.

EFS supports electronic filing of publication-ready patent application information as a subsequent filing for pre-grant publication. Pre-grant publication submissions can include: utility or plant specification, patent application information for publication on the front page of the publication, submission transmittal and fee transmittal.

EFS supports electronic filing of sequence listing(s) in computer readable form (CRF) for pending applications. The CRF sequence listing is submitted according to Patent business rules in ASCII (text) file format.

EFS supports electronic filing of assignment recordation documents for previously filed patent applications and patents.

EFS supports Windows 95, Windows 98, Windows NT, and Windows 2000. You will need an Internet Service Provider or connection to use EFS.

EFS accepts images as TIFF (Tagged Image File Format) files only. TIFF is a widely accepted image file format. Submit image files, including figures and declarations, as TIFF files.

EFS requires a scanner capable of producing black and white TIFF images at 300 dpi using CCITT Group 4 compression.

EFS requires a Compact Disk Recorder for submissions over 10 megabytes in size. CD submissions should be CD-ROM or CD-R.

EFS supports electronic filing of information disclosure statements with new utility applications and as subsequent submissions for previously filed applications.

What EFS Does Not Support

- EFS does not allow you to electronically file international (PCT), design, plant, reissue, re-exam, or secrecy order patent applications.

- You cannot submit all documents to be matched with the paper file wrapper during the prosecution of an application electronically, including amendments.

- EFS does not support electronic filing of submissions that are greater than 10 megabytes via the Internet.

- EFS does not support electronic filing of color images.

Conventions Used in This Manual

The following list contains the conventions used in this manual to represent common terms, emphasize items, and help you identify certain text.

Note: … Text with a Note box contains helpful hints you may use to aid the authoring process.

This symbol indicates that the included text is additional information that may be helpful to you.

This symbol is used to stress a warning or reminder.

GETTING STARTED

Basic Steps to Patent Application Electronic Filing

The following is a general overview of the EFS process describing the course of actions needed in order to successfully complete the electronic filing of patent applications.

Prepare to Use EFS

1. Obtain a customer number and a digital certificate from the USPTO.
2. Install or upgrade to a word processing application that permits XML authoring (Microsoft Word 97, Word 2000, or Corel WordPerfect 9.0).
3. Acquire software to create image files in the TIFF format.
4. Obtain EFS software from the USPTO.
5. Review the **Keys to a "Stress-Free" Electronic Submission** (page 7)

Electronically File a New Utility Patent Application

1. Create image files (e.g. drawings, declaration, assignment conveyance documents).
2. Tag the specification text using an XML word processing application (e.g. PASAT - Patent Application Specification Authoring Tool).
3. If necessary, attach images to the specification XML document while authoring the XML document. Images can be drawings, complex chemical formulae, complex math equations, and custom characters.
4. View the authored XML tagged specification document using a web browser (e.g. Internet Explorer 5.5 with TIFF viewer plug-in) and the USPTO standard style sheet that is provided as part of EFS authoring software).
5. Author tagged patent application transmittal, fee transmittal, application data sheet, and assignment cover sheet, using ePAVE (electronic Packaging and Validation Engine).
6. Create a submission package by attaching the tagged specification XML document, the TIFF images containing scanned pages of the oath, declaration, or power of attorney using ePAVE. ePAVE will automatically attach the transmittal, fee transmittal, application data sheet, assignment cover sheet, and associated assignment conveyance forms that were created using ePAVE.
7. Digitally sign the submission package using ePAVE and your digital certificate.
8. Submit the submission package to USPTO via the Internet using ePAVE.

9. Receive the electronic acknowledgement receipt that USPTO sends you upon successful completion of the transmission.

System Requirements

	Minimum	Recommended for best results
Pentium Processor	233 MHz	266 MHz or higher
Memory	64 MB RAM	128 MB RAM
Screen Display	800 x 600	1024 x 768 or higher
Browser	Internet Explorer 5.0	Internet Explorer 5.5
Plug-in	TIFF Viewer Plug-In	AlternaTIFF Plug-In v1.3.5 or higher
Free Hard Disk Space	42 Megabytes	
Internet Connection	56 Kbps or faster modem	
Operating System	Windows 95/98 (Service Release 2 or higher)/2000/NT 4.0 (Service Pack 3 or later)	
Applications	Microsoft Word 97/2000 including Office Assistant for PASAT -OR- Corel WordPerfect 9 (Service Pack 2 or higher) for the Template for Specification Authoring Graphics package (for TIFF image formatting) such as Imaging for Windows Up-to-date Printer Driver (s) MDAC 2.1	
Scanner	Capable of producing black and white TIFF images at 300 dpi; CCITT Group 4 compression	

Plug-In Recommendation

To enhance use of EFS, it is recommended that you obtain the AlternaTIFF viewer plug-in located at www.mieweb.com/alternatiff/. This is a browser plug-in that displays TIFF

files. It is compatible with Netscape Navigator 3.0 and higher as well as Internet Explorer 3.0 and higher. AlternaTIFF is a 32-bit Windows program requiring Windows 95 and a 32-bit browser. This program is free to use for any purpose; however, you are required to register the program before you can use it. The install program automatically submits your registration over the Internet. The latest version is AlternaTIFF v1.4.0, however versions of AlternaTIFF v1.3.5 or higher work just as well.

Keys to a "Stress-Free" Electronic Submission

1. Get your Customer Number and PKI Digital Certificate
2. Scan or convert all images (using settings specified – 300x300 dpi, Black & White, CCITT Group 4 Compression, 8 ½ x 11 in. for drawings and forms)
   a. Inline graphics
      i. Complex Chemical Structures
      ii. Math Equations
      iii. Tables
      iv. Custom Characters
   b. Drawings (Figures)
   c. Declaration and/or Power of Attorney Forms
   d. Assignment Conveyance Documents
   e. Small Entity Statements
3. Naming your files
   a. File names are limited to 25 characters and **MUST** be Alphanumeric
      i. The "8.3" file naming convention is recommended
      ii. 8=the file name; 3=the file extension (*.s4w, *.doc, *.wpd, etc)
   b. **DO NOT** include special characters in your file name

      Example: "&", "-", "_", "#"
   c. **Note:** When creating your ePAVE submission folder, the submission folder name MUST differ from the names of any submission files/figures that will be included in the submission

4. If authoring from a source document, convert the source document text to Arial, CG Times or Times New Roman. Special characters, such as certain math or chemical symbols, may need to be scanned as TIFF images
5. Create a working or "source" document folder on a local or shared drive to store all files relating to the submission

   Note the file naming convention mentioned above.

6. Copy all specification-related files into this folder:

   a. All images (see list above)

   b. Source document(s)

   c. Save the authored specification to this folder.

   d.

IMPORTANT NOTE: Once you have begun authoring your specification, **DO NOT** move any files from this folder.

Example: Images inserted into an XML document are NOT embedded in the document. There is a HYPERLINK created to the file path of the image. If the image is moved from the folder once it has been inserted into the XML document, the hyperlink will not be able to find its path.

7. Launch your patent application specification source document
8. Launch the specification authoring tool

   a. Author
   - Save Specification

   b. Validate
   - Edit and/or Save Specification

   c. View/Export
   - Edit and/or Save Specification

9. Launch ePAVE

   a. Author forms

   b. View/Print

   c. Submit

Software Description

The USPTO provides authoring tools for Microsoft Word and Corel WordPerfect environments. At this time, the recommended authoring tool is PASAT, because this tool provides more functionality than the WordPerfect TSA authoring tool.

PASAT

As a component of EFS authoring, Patent Application Specification Authoring Tool (PASAT) is used to author electronic (XML) versions of specifications. PASAT enables you to create patent specifications in the XML format required by USPTO with little or no XML knowledge. PASAT uses the familiar Microsoft Word 97 or Word 2000 environment with a slightly modified interface to create a specification, and then exports the XML document.

Refer to the Authoring Manual PASAT (for Microsoft Word users) for more information about PASAT.

WordPerfect Template for Specification Authoring (TSA)

For users who do not use Microsoft Word, the WordPerfect TSA is an alternative authoring facility. WordPerfect TSA is used to author electronic versions of the Specification document in XML structured format. Refer to the Authoring Manual (for WordPerfect users) for more information about the WordPerfect TSA.

ePAVE

EFS is designed around a common submission engine that creates electronic forms to collect patent application information and allows the user to attach a tagged, structured specification document and the linked image files. Other patent application documents such as the declaration are attached as scanned single-page TIFF image files and ASCII text file containing biosequence listings, computer program listings, or large tables.

EFS electronic Packaging and Validation Engine (ePAVE) desktop software enables patent applicants and appointed practitioners to conduct real time electronic filing of select new utility and provisional patent applications.

Using USPTO developed ePAVE submission software, users create XML documents such as a fee transmittal and application data sheet; attach electronic documents and image files; and validate the completeness of the submission based on Patent business rules. The ePAVE program automatically bundles, compresses, encrypts and digitally signs the submission package once the applicant or appointed practitioner enters an electronic signature and digital certificate authentication information. When the

submission is successfully received at USPTO, an Acknowledgement Receipt is displayed in real time at the user's desktop.

USPTO Direct Security Software

USPTO Direct Security Software is an USPTO-branded version of the Entrust/Direct product suite which is used to protect data from unauthorized disclosure. Patent business customers who obtain a digital certificate from the USPTO will be provided with USPTO Direct Security Software to create a digital certificate that is used to access the Patent Application Information Retrieval (PAIR) system via the Internet and to use ePAVE. The Entrust/Direct certificate is assigned to a practitioner or inventor and is associated with a USPTO assigned customer number for correspondence so access to patent application data is protected. EFS uses Entrust/Direct software and digital certificates to ensure patent application submission security, integrity and authenticity.

For additional information, please link to web site
http://www.entrust.com/products/transition/direct.htm.

Web Browser

The web browser enables the filer to connect to the EFS web site and to electronically file a submission. Internet Explorer 5.5 allows for high-speed Internet access, provides faster ways to complete work, supports portable computers and USPTO standard style sheets.

The USPTO standard style sheets determines how the XML files (specification, transmittal, fee transmittal and application data sheet) created by the EFS software tools are rendered or displayed in the browser for viewing and printing. For example, the headings of sections in the specification are bolded and paragraphs are double-spaced.

Technical Limits

One objective of EFS is to allow patent applicants to electronically file the same substantive content currently filed in paper form. The current generation of EFS software allows filing of most new utility applications, provisional applications and all pre-grant publication submissions. In addition to the specific hardware/software limitations, there are two types of technical limitations that users should understand. They are:

1. EFS files must be smaller than 10MB before compression for electronic transmission. For files larger than 10MB, 1 CD may be submitted by mail or in person.
2. EFS accepts only specific file formats: TIFF (Tagged Image File Format), ASCII text file biosequence listings, computer program listings, and large tables, and XML documents.

3. The number of cover sheets per submission and properties per coversheet is limited based on the submission type:

   - 5 coversheets per new utility application and only that property may be referenced in the coversheet

   - 5 coversheets per provisional application and only that property may be referenced in the coversheet

   - 15 coversheets per submission for subsequently filed assignment submissions. Each coversheet may reference up to 999 properties.

Each of these can have a minimum of 1 tiff per coversheet, but per coversheet we have no limitation except the ePAVE 10MB restriction.

Application Size Limits

In November of 2000, EFS began to accept new applications and pre-grant publication submissions smaller than 10 Megabytes (prior to compression by ePAVE) in electronic form via the Internet. EFS allows the user to produce a compact disc for submissions larger than 10 Megabytes. One page of text is about 3kb; one image is generally less than 50kb in CCITT Group 4 compression and is about 960kb when uncompressed. Users should submit files that are in CCITT Group 4 compression. The actual limit in terms of page count and number of images will vary with the amount of formatting of the text and the complexity of the drawings.

As an approximation, these are the limits of the system for electronic submission via the Internet.

3000 pages text	0 drawings	(9000k text)
2000 pages text	60 drawings	(6000k text, 3000k figures)
1000 pages text	120 drawings	(3000k text, 6000k figures)
100 pages text	170 drawings	(300k text, 8500k figures)

EFS allows a user to create a CD-ROM or CD-R for submission by mail or in person for submissions over 10 Megabytes. This process will require extra hardware, including a CD recorder.

Image File Requirements

EFS accepts only TIFF image files. The images must be 300 dpi, black and white TIFF images with CCITT Group 4 compression. EFS also accepts uncompressed TIFF images, but this is not recommended. Many graphics programs produce TIFF output; the Windows accessory program, Imaging, will produce TIFF files with CCITT Group 4

compression and is available in all versions of Windows. The image files should be on a local disk drive; ePAVE may have difficulty locating image files on a different drive, especially a network drive. The USPTO is investigating accepting a wider range of file formats, including ChemDraw and Mathematica files in future releases.

Technical Setup

Special Characters

To enable electronic filing of patent applications that contain special characters or symbols EFS supports the Lucida Sans Unicode font which covers the most commonly used characters. The EFS authoring tool, PASAT, will translate symbols to the correct Unicode characters. In addition, the filer may create custom characters and save them as TIFF images. These images can be inserted into the application specification document. ePAVE does not accommodate use of special characters during form creation.

Use only ASCII text when creating forms in ePAVE.

Use of EFS Software on Multiple Computers

The installation of EFS software components, ePAVE, PASAT and WordPerfect TSA are subject to terms noted in individual licenses. (See Appendices A, B, and C)

In order for EFS ePAVE to upload an electronic submission properly a user must transfer his or her digital certificate file. The digital certificate is created using the USPTO Direct Security software after receiving reference information from the USPTO. There is no need to reinstall this software on multiple machines once you have created a profile. Users can simply transfer the digital certificate file to the computer of their choice.

Use of EFS Software on a Network

EFS software components are client applications. ePAVE can be used with network Internet connections and with networked machines. In order to install ePAVE or some of its components, you must have local Administrator privileges. If you are unsure if you have these privileges, contact your Information Technology staff. The ePAVE installation program will prompt you during the installation process if local Administrator privileges are required for installation. (Refer to the ePAVE user manual for more details.)

The most important consideration in effective use of EFS in a network environment is file management. The application files created with the authoring tool (PASAT or TSA) or with ePAVE must reside in network storage that is commonly mapped to all machines working with the application. For example, a network drive where files will be stored should be referred to by the same relative path for all machines that will be working with

the application. All EFS files, both PASAT and ePAVE for a given application, are best stored in a dedicated folder. This allows common access to the files from any PC in the network and allows EFS to locate and attach/bundle all the files constituting the application in assembling the submission. Since EFS software associates an application's files with each other based on their pathname, once the files have been stored their location should not be changed.

SCENARIOS

This section provides an explanation of EFS terminology, the patent application publication and EFS submissions process, and several informative scenarios that can familiarize you with EFS.

Note Regarding Terminology

A new application is one that is being originally filed electronically. These applications are still subject to the pre-grant publication rules, and they will also contain some information that dictates how they will be published (i.e. early, at 18 months, or not at all). These applications will be assigned a filing date, assigned an application number, entered into the normal flow of examination and will be published according to the same rules as a new paper filing.

A pre-grant submission is a submission of a copy (possibly amended or redacted) of a specification already filed at the USPTO, together with some information that dictates how it will be published. These submissions will be published but not entered into the examination process. These applications already have a filing date, application number, and confirmation number. The amendments or modifications that appear in these submissions are not automatically made in the corresponding application file at the USPTO; these amendments must be made according to conventional procedure.

Patent Application Publication Process and EFS Submissions

As required by the American Inventor's Protection Act and the 1999 amendments to 35 USC 122(b), the USPTO began publishing applications, filed on or after 11/29/2000, at 18 months after their earliest claimed priority date under 35 U.S.C. 14 weeks prior to this 18-month date, applications enter the USPTO publication cycle. As each paper application is filed, it is electronically captured (i.e. scanned) and assigned a projected publication date. 14 weeks prior to this date, those electronically scanned applications enter the publication queue. If the applicant requests early publication and pays the publication fee, that application immediately enters the 14-week publication cycle. If the applicant requests non-publication at the time of filing and makes the appropriate certification no publication date is assigned.

The publication queue also includes the following EFS submissions:

1. New utility applications filed via EFS after November 29, 2000, are added in the same manner as new applications filed in paper;

2. Original redacted and amended submissions filed before the original application enters the 14-week publication cycle are used to replace the data captured at the time of filing; their publication dates are not changed unless applicant requested early publication when making the EFS submission;
3. Republication amended and corrected publications immediately enter the publication cycle;
4. Voluntary publications of applications pending on November 29, 2000, which would otherwise not be published until they were patented immediately enter the publication cycle.

Once each week, application management software creates a list of cases to be published fourteen weeks later. This list includes applications due for publication on their 18-month date and immediate publication requests. This time frame is similar to the printing time frame used for issued patents.

This schedule is important to applicants when they are submitting amended or redacted applications for publication. If the amended or redacted submission is made before the application enters the publication queue, the newly submitted data will replace the initially filed data. The applicant will owe the publication fee when the issue fee is due (provided no request for early publication was filed). If the submission is made after this date, the initial data will already be in the print queue. The new submission will be added to the next available publication cycle as a republication; this will cost $130 for processing and $300 for publication on top of the $300 publication fee associated with the earlier publication.

USPTO delivers the data to a printing contractor using the following timeline:

14 weeks prior to publication	Applications due for publication at 18 months enter the publication queue along with applications requesting immediate publication. This is the applicant's last chance to submit an amended or redacted copy before first publication.
12 weeks prior to publication	Data gathered and validated at USPTO.
16 months from earliest filing	Last chance to submit a redacted copy to replace the as-filed copy.
4 weeks prior to publication	Last chance to abandon application to avoid publication.**

** Please do not wait this long. This date represents the last moment for the USPTO to act on this request and remove the application from the printing queue. Applicant may

submit a letter of abandonment after this point; however there is no assurance that USPTO will be able to act on the request

Scenario 1: Filing a New Utility Application Using EFS

Rule Basis: 35 USC Sections 111,112,113; 35 USC § 122; applicable 37 CFR sections and including section 1.76 Application Data Sheet (Refer to Legal Framework for Electronic Filing posted at the EFS web site address for more rule based information)

When: As for paper filings under 35 USC 111

Fee: As for paper filings, fees may be paid by bankcard (credit card) or deposit account. Fee for early publication is $300.

Comment: Voluntary use. Only accepting regular domestic utility applications; no design, no plant, no secrecy order (national security) applications, and no international (PCT) applications. EFS does not accept color drawings/images. In this user manual please refer to the **What EFS Does Not Support** and **Technical Limits** sections to learn about other EFS limitations. For very large patent application files please use compact discs for submission as described in 37 CFR § 1.52.

The official copies of all documents submitted using EFS are the paper versions printed from the electronic files received at the USPTO.

Preparation for Authoring

Prior to using EFS software, assemble the patent application information. Obtain an electronic TIFF image of each drawing figure, including images such as complex chemical formulae or mathematical equations that will be included in the text of your specification. Obtain a scanned image of the declaration with the signature(s) of the inventor(s). A scanned image of a small entity statement may be included even though these statements are no longer required.

For information about preparing the required image file(s) refer to the EFS Authoring and Submission User Manuals or Frequently Asked Questions documents. Patent application related information such as fee information, small entity status, type of publication, non-publication request and information equivalent to that on a typical transmittal letter will be created using ePAVE. Image files (equivalent to these patent application papers) are not required because these forms are created using the ePAVE software.

The text of the application specification may be typed directly into either EFS specification authoring tool, or it may be copied-and-pasted from an electronic source document. If an electronic copy of a source document exists, it should be accessible.

Authoring Patent Application Specification

Specific use of each XML authoring tool (Patent Application Specification Authoring Tool (PASAT) or the WordPerfec TSA) is described in detail in the appropriate EFS Authoring Tool User Manual. Using either authoring tool you will create an electronic copy of the specification as required by 35 USC 112 and 113, including the claims and associated drawing figures. The output of this authoring process will be a structured, tagged electronic text document file with links to the figure image files or image files containing chemical or mathematical formulae.

Viewing

When the specification is formatted, it can be viewed using the USPTO standard XML style sheet in Internet Explorer 5.0 or higher. During the submission process the filer must certify that the documents you intend to submit have been reviewed. ePAVE allows the filer to view and/or print the specification, including drawings, declaration, and also the forms (e.g. fee transmittal and application transmittal) created using ePAVE.

Submission Folder

EFS submission client application (ePAVE) allows the user to create a submission folder that will contain all the electronic files to be sent to the USPTO as part of the electronic filing. For a new utility patent application filing, the authored XML tagged specification document, along with any linked image files are attached. ePAVE prompts the user to attach the scanned declaration image file. ePAVE will automatically include the other XML document files you created, such as the application data sheet, fee transmittal, and transmittal document, in the submission folder.

Submission

After the specification and declaration are attached and other appropriate information has been entered, ePAVE will validate the contents to ensure that you have included certain attachments and information. For a new application submission, the user can override select validation errors. While this is not recommended, under current patent business rules a new patent application may be filed with fewer than all of the required parts. However, follow up action will be necessary to complete the application and correct any deficiencies and may require an additional fee.

The submit screen requires the filer to certify that the content of the submission has been reviewed.

The last two steps prior to submission allows the user to electronically sign the application transmittal and authenticate the digital certificate by providing the computer directory location of the filer's certificate profile and entering a password. **An individual authorized to file the application (e.g. attorney or agent) must make the electronic**

signature. A support staff member under direction and control of the attorney or agent may make the digital signature made using the digital certificate.

ePAVE will submit the patent application submission package via your Internet connection in encrypted and compressed form to ensure the security and integrity of the electronic submission. On receipt of the application, the USPTO will decrypt and decompress the file and send the filer an electronic receipt. This receipt includes the application number, date and time of receipt, name and size of files submitted and some patent application identifying information, such as the first-named inventor, the title of the invention, and the attorney docket number. The user can print this electronic postcard and maintain it as evidence of the time and date and content of the filing. ePAVE automatically saves the electronic receipt file in the submission folder on filer's computer. After the electronic files have been printed to paper and undergone a formalities review, the USPTO will mail the standard paper official patent application filing receipt.

Note: For submission of a new utility patent application you will be given three options for pre-grant publication. Early publication will result in publication at 14-15 weeks from filing; a $300 publication fee along with the standard filing fee is due. Normal publication will result in publication at 18 months from the earliest claimed priority date; the publication fee is due at the time of payment of the issue fee. A request not to publish has no fee associated with it because publication will not occur.

Note: A request for non-publication requires the filer to certify that the application has not been and will not be the subject of a patent application in a foreign country or an international authority that publishes such filings after 18 months.

Note: For more information regarding pre-grant publication please consult 37 CFR § 1.211-1.221 for a full description of the process. Ordinarily, the application as filed in either paper or by EFS-New Applications is used for the production of the patent application publication.

Scenario 2: Filing a New Utility Application with Assignment

Rule Basis: 35 USC § 111, 112, 113; 35 USC Section 122; applicable 37 CFR sections including section 1.76 Application Data Sheet and 37 CFR 3 (Refer to Legal Framework for Electronic Filing posted at the EFS web site address for more rule based information)

Patent Assignment: 35 U.S.C. 261; 37 CFR 1.21; 37 CFR Chapter 3. Include with your new utility patent application an assignment recordation form and an assignment conveyance document.

When: As for paper filings under 35 USC 111

Fee: As for paper filings, fees may be paid by bankcard (credit card) or deposit account. Fee for early publication is $300.

Comment: Voluntary use. Only accepting regular domestic utility applications; no design, no plant, no secrecy order (national security) applications, and no international (PCT) applications. EFS does not accept color drawings/images. In this user manual please refer to the **What EFS Does Not Support** and **Technical Limits** sections to learn about other EFS limitations. For very large patent application files please use compact discs for submission as described in 37 CFR § 1.52.

The official copies of application documents submitted using the EFS are the paper versions printed from the electronic files received at the USPTO. The patent assignment documents are electronically stored and processed through the Patent and Trademark Assignment System (PTAS).

Preparation for Authoring

Prior to using EFS software, assemble the patent application information. Obtain an electronic TIFF image of each drawing figure, including images such as complex chemical formulae or mathematical equations that will be included in the text of your specification. Obtain a scanned image of the declaration with the signature(s) of the inventor(s). A scanned image of a small entity statement may be included even though these statements are no longer required.

For information about preparing the required image file(s) refer to the EFS Authoring and Submission User Manuals or Frequently Asked Questions documents. Patent application related information such as fee information, small entity status, type of publication, non-publication request and information equivalent to that on a typical transmittal letter will be created using ePAVE. Image files (equivalent to these patent application papers) are not required because these forms are created using the ePAVE software.

The text of the application specification may be typed directly into either EFS specification authoring tool, or it may be copied-and-pasted from an electronic source document. If an electronic copy of a source document exists, it should be accessible.

An assignment cover sheet and assignment conveyance documents may be included with new utility applications. The conveyance documents should be scanned as TIFF images (black and white, 300 dpi, CCITT Group 4 compression). In ePAVE the user will create the coversheet XML form. Each new filing may include from 0 to 5 coversheets and their associated conveyance images.

Authoring Patent Application Specification

Specific use of each XML authoring tool (Patent Application Specification Authoring Tool (PASAT) or the WordPerfect TSA) is described in detail in the appropriate EFS Authoring Tool User Manual. Using either authoring tool you will create an electronic copy of the specification as required by 35 USC 112 and 113, including the claims and associated drawing figures. The output of this authoring process will be a structured, tagged electronic text document file with links to the figure image files or image files containing chemical or mathematical formulae.

Viewing

When the specification is formatted, it can be viewed using the USPTO standard XML style sheet in Internet Explorer 5.0 or higher. During the submission process the filer must certify that the documents you intend to submit have been reviewed. ePAVE allows the filer to view and/or print the specification, including drawings, declaration, and also the forms (e.g. fee transmittal and application transmittal) created using ePAVE.

Submission Folder

EFS submission client application (ePAVE) allows the user to create a submission folder that will contain all the electronic files to be sent to the USPTO as part of the electronic filing. For a new utility patent application filing, the authored XML tagged specification document, along with any linked image files are attached. ePAVE prompts the user to attach the scanned declaration image file. ePAVE will automatically include the other XML document files you created, such as the application data sheet, fee transmittal, and transmittal document, in the submission folder.

Submission

After the specification and declaration are attached and other appropriate information has been entered, ePAVE will validate the contents to ensure that you have included certain attachments and information. For a new application submission, the user can override select validation errors. While this is not recommended, under current patent business rules a new patent application may be filed with fewer than all of the required parts. However, follow up action will be necessary to complete the application and correct any deficiencies and may require an additional fee.

The submit screen requires the filer to certify that the content of the submission has been reviewed.

The last two steps prior to submission allows the user to electronically sign the application transmittal and authenticate the digital certificate by providing the computer directory location of the filer's certificate profile and entering a password. **An individual authorized to file the application (e.g. attorney or agent) must make the electronic**

signature. A support staff member under direction and control of the attorney or agent may make the digital signature made using the digital certificate.

ePAVE will submit the patent application submission package via your Internet connection in encrypted and compressed form to ensure the security and integrity of the electronic submission. On receipt of the application, the USPTO will decrypt and decompress the file and send the filer an electronic receipt. This receipt includes the application number, date and time of receipt, name and size of files submitted and some patent application identifying information, such as the first-named inventor, the title of the invention, and the attorney docket number. The user can print this electronic postcard and maintain it as evidence of the time and date and content of the filing. ePAVE automatically saves the electronic receipt file in the submission folder on filer's computer. After the electronic files have been printed to paper and undergone a formalities review, the USPTO will mail the standard paper official patent application filing receipt.

Note: For submission of a new utility patent application you will be given three options for pre-grant publication. Early publication will result in publication at 14-15 weeks from filing; a $300 publication fee along with the standard filing fee is due. Normal publication will result in publication at 18 months from the earliest claimed priority date; the publication fee is due at the time of payment of the issue fee. A request not to publish has no fee associated with it because publication will not occur.

Note: A request for non-publication requires the filer to certify that the application has not been and will not be the subject of a patent application in a foreign country or an international authority that publishes such filings after 18 months.

Note: For more information regarding pre-grant publication please consult 37 CFR § 1.211-1.221 for a full description of the process. Ordinarily, the application as filed in either paper or by EFS-New Applications is used for the production of the patent application publication.

Scenario 3: Provisional Application

Rule Basis: 35 USC § 111(b); 35 USC § 112 ¶ 1; 35 USC § 113; 35 USC § 122; applicable 37 CFR sections including sections 1.16(k) and 1.76 Application Data Sheet (Refer to Legal Framework for Electronic Filing posted at the http://www.uspto.gov/ click on EFS tab for more rule based information)

When: As for paper filings under 35 USC 111

Fee: As for paper filings, fees must be paid by bankcard (credit card) or deposit account. $80 for small entity; $160 for large entity.

Comment: Voluntary use. Allows filing under 35 U.S.C. 111(b) without a formal patent claim, oath or declaration, or any information disclosure statement and provides the means to establish an early effective filing date in a non-provisional patent application filed under 35 U.S.C. §111(a).

Provisional applications are not published.

EFS does not accept color drawings/images. In this user manual please refer to the **What EFS Does Not Support** and **Technical Limits** sections to learn about other EFS limitations. For very large patent application files please use compact discs for submission as described in 37 CFR § 1.52.

The official copies of all documents submitted using the EFS are the paper versions printed from the electronic files received at the USPTO.

Preparation for Authoring

Prior to using EFS software, assemble the patent application information. Obtain an electronic TIFF image of each drawing figure (if applicable), including images such as complex chemical formulae or mathematical equations that will be included in the text of your specification. Obtain a scanned image of the declaration with the signature(s) of the inventor(s). A scanned image of a small entity statement may be included even though this statement is no longer required.

For information about preparing the required image file(s) refer to the EFS Authoring and Submission User Manuals or Frequently Asked Questions documents. Patent application related information such as fee information, small entity status, type of publication, non-publication request and information equivalent to that on a typical transmittal letter will be created using ePAVE. Image files (equivalent to these patent application papers) are not required because these forms are created using the ePAVE software.

The text of the application specification may be typed directly into either EFS specification authoring tool, or it may be copied-and-pasted from an electronic source document. If an electronic copy of a source document exists, it should be accessible.

A claim is not required for provisional applications. Enter place holding text such as “To be determined.” in the claim section to validate the specification in cases where no claim is being included.

The application data sheet that is created in ePAVE will serve as the provisional application cover sheet. While not required, a declaration, small entity statement, and assignment may be included with the provisional application, if desired.

The comments section of ePAVE produced transmittal form can be used to identify any U.S. Government agency that has a property interest in the provisional application.

As with the new utility application e-filing, the correspondence customer number will be required to identify a correspondence address for the e-filed provisional application.

Authoring Provisional Patent Application Specification

Specific use of each XML authoring tool (Patent Application Specification Authoring Tool (PASAT) or the WordPerfect TSA) is described in detail in the appropriate EFS Authoring Tool User Manual. Using either authoring tool you will create an electronic copy of the specification as required by 35 USC 112 and 113, including associated drawing figures and at least entry of one claim or claim tag. Provisional applications do not require claim text to be part of the specification but the XML template needs one claim tag entered with or without place holding text to be valid. The output of this authoring process will be a structured, tagged electronic text document file with links to the figure image files or image files containing chemical or mathematical formulae.

Viewing

When the specification is formatted, it can be viewed using the USPTO standard XML style sheet in Internet Explorer 5.0 or higher. During the submission process the filer must certify that the documents you intend to submit have been reviewed. ePAVE allows the filer to view and/or print the specification, including drawings, declaration, and also the forms (e.g. fee transmittal and application transmittal) created using ePAVE.

Submission Folder

EFS submission client application (ePAVE) allows the user to create a submission folder that will contain all the electronic files to be sent to the USPTO as part of the electronic filing. For a new utility patent application filing, the authored XML tagged specification document, along with any linked image files are attached. ePAVE will automatically include the other XML document files you created, such as the application data sheet, fee transmittal, and transmittal document, in the submission folder.

Submission

After the specification and declaration are attached and other appropriate information has been entered, ePAVE will validate the contents to ensure that you have included certain attachments and information. For a new and provisional application submission, the user can override select validation errors. While this is not recommended, under current patent business rules a new patent application may be filed with fewer than all of the required parts. However, follow up action will be necessary to complete the application and correct any deficiencies and may require an additional fee.

The submit screen requires the filer to certify that the content of the submission has been reviewed.

The last two steps prior to submission allows the user to electronically sign the application transmittal and authenticate the digital certificate by providing the computer directory location of the filer's certificate profile and entering a password. **An individual authorized to file the application (e.g. attorney or agent) must enter the electronic signature mark.** A support staff member under direction and control of the attorney or agent may make the digital signature made using the digital certificate.

ePAVE will submit the patent application submission package via your Internet connection in encrypted and compressed form to ensure the security and integrity of the electronic submission. On receipt of the application, the USPTO will decrypt and decompress the file and send the filer an electronic receipt. This receipt includes the provisional application number, date and time of receipt, name and size of files submitted and some patent application identifying information, such as the first-named inventor, the title of the invention, and the attorney docket number. The user can print this electronic postcard and maintain it as evidence of the time and date and content of the filing. ePAVE automatically saves the electronic receipt file in the submission folder on filer's computer. After the electronic files have been printed to paper and undergone a formalities review, the USPTO will mail the standard paper official patent application filing receipt.

Scenario 4: Voluntary Pre-Grant Publication

Rule Basis: 37 CFR § 1.221(a)

When: On or after 11/29/2000 for cases pending on 11/29/2000

Fee: $300 for publication; plus $130 for processing

Comment: Applications will be published 14-15 weeks from submission through EFS. Eighteen-month publication applies only to applications filed on or after 11/29/2000, however applications filed prior to this date and pending at USPTO may be published under 37 CFR 1.221(a). If you have made amendments to the claims during prosecution, you may file the application with the amended claims. For more information regarding pre-grant publication please consult regulations 37 CFR Sections 1.211-1.221 for a full description of the process.

Note: In order to prevent replacement of the wrong specification with an EFS pre-grant publication submission, the USPTO is issuing confirmation numbers for each application number. Once an application is perfected (i.e. in condition for publication) a 4-digit confirmation number is generated and transmitted to the applicant. This confirmation number is used in conjunction with the application number to identify pending applications.

Note: Please be sure to enter the correct application filing date as failure to do so will prevent publication.

In EFS, when an applicant is submitting an application for publication or republication, the applicant must enter both the application number and the confirmation number in order to submit the application. This procedure is necessary because many applications will have identical filing dates and similar application numbers; thus a typographic error in the application number could result in failure to publish an application or improper publication of an application. The combination of the application number and the randomly generated confirmation number will prevent this.

Note: Publication-ready applications are prepared following the same process used to create a new utility patent application.

Authoring Patent Application Specification

Specific use of each XML authoring tool (Patent Application Specification Authoring Tool (PASAT) or the WordPerfect TSA) is described in detail in the appropriate EFS Authoring Tool User Manual. Using either authoring tool you will create an electronic copy of the specification as required by 35 USC 112 and 113, including the claims and associated drawing figures. The same tool will create the patent specification for 18-month publication as required by 35 USC § 122(b). The output of this authoring process will be a structured, tagged electronic text document file with links to the figure image files or image files containing chemical or mathematical formulae.

Scenario 5: Amended Publication as First Pre-Grant Publication by the USPTO

Rule Basis: 37 CFR 215 (c)

When: For an application that has been amended during prosecution with no claim to priority and no request for early publication, the last date for submission is 14 months from the filing date or at least one month from filing, whichever is later. For example, if an application with no claim to priority was filed January 2, 2001, an applicant must submit the EFS copy of the application as amended no later than March 2, 2002.

For an amended application with foreign priority dating back an extra year, less time is provided for filing an amended application. For example, if there is foreign priority dating to January 2, 2000, and a filing date in the U.S. of January 2, 2001, fourteen months from earliest priority under 35 U.S.C. is March 2, 2001. An applicant must submit an EFS copy of their

application by March 2, 2001, (two months after the filing date) for the submission to be timely.

For an application claiming priority to a PCT application with two years of priority claim, applicants would have one month from filing in the U.S. to file the amended pre-grant publication submission.

Fee: No fee is charged via EFS if applicant does not submit request for early publication. A $300 publication fee will be collected at time of payment of the patent issue fee. If, however, an early publication request is indicated, then a $300 application fee will be collected via EFS when the submission is filed.

Comment: If an amended publication is submitted after the initial application enters the publication queue (or after it has been published), it is considered a republication request. A $300 publication fee and a $130 processing fee for the republication, in addition to the $300 publication fee for the first publication are due. For more information regarding pre-grant publication please consult regulations 37 CFR § 1.211-1.221 for a full description of the process.

Note: In order to prevent replacement of the wrong specification with an EFS pre-grant publication submission, the USPTO is issuing confirmation numbers for each application number. Once an application is perfected (i.e. in condition for publication) a 4-digit confirmation number is generated and transmitted to the applicant. This confirmation number will be used in conjunction with the application number to identify pending applications.

Note: Please be sure to enter the correct application filing date as failure to do so will prevent publication.

Authoring Patent Application Specification

Specific use of each XML authoring tool (Patent Application Specification Authoring Tool (PASAT) or the WordPerfect TSA) is described in detail in the appropriate EFS Authoring Tool User Manual. Using either authoring tool you will create an electronic copy of the specification as required by 35 USC 112 and 113, including the claims and associated drawing figures. The same tool will create the patent specification for 18-month publication as required by 35 USC § 122(b). The output of this authoring process will be a structured, tagged electronic text document file with links to the figure image files or image files containing chemical or mathematical formulae.

Viewing

When the specification is formatted, it can be viewed using the USPTO standard XML style sheet in Internet Explorer 5.0 or higher. During the submission process the filer must certify that the documents have been reviewed. ePAVE allows the filer to view and/or print the specification, including drawings, and the forms (e.g. fee transmittal and application transmittal) created using ePAVE.

Submission Folder

EFS submission client application (ePAVE) allows the user to create a submission folder that will contain all the electronic files to be sent to the USPTO as part of the electronic filing. For an original publication as amended submission , the authored XML tagged specification document, along with any linked image files are attached. ePAVE will automatically include the other XML document files you created, such as the application data sheet, fee transmittal, and transmittal document, in the submission folder.

Submission

After the specification is attached and other appropriate information has been entered, ePAVE will validate the contents to ensure that you have included certain attachments and information. No override of validation errors is permitted for pre-grant publication submissions.

The submit screen requires the filer to certify that the content of the submission has been reviewed.

The last two steps prior to submission allows the user to electronically sign the application transmittal and authenticate the digital certificate by providing the computer directory location of the filer's certificate profile and entering a password. **An individual authorized to file the application (e.g. attorney or agent) must make the electronic signature.** A support staff member under direction and control of the attorney or agent may make the digital signature made using the digital certificate.

ePAVE will submit the patent application submission package via your Internet connection in encrypted and compressed form to ensure the security and integrity of the electronic submission. On receipt of the application, the USPTO will decrypt and decompress the file and send the filer an electronic receipt. This receipt includes the application number, date and time of receipt, name and size of files submitted and some patent application identifying information, such as the first-named inventor, the title of the invention, and the attorney docket number. The user can print this electronic postcard and maintain it as evidence of the time and date and content of the submission. ePAVE automatically saves the electronic receipt file in the submission folder on filer's computer.

Note: For more information regarding pre-grant publication please consult 37 CFR § 1.211-1.221 for a full description of the process. Ordinarily, the application as filed in

either paper or by EFS-New Applications is used for the production of the patent application publication.

Scenario 6: Redacted Publication Submission as First Pre-Grant Publication by the USPTO

Rule Basis: 35 USC 122(b)(2)(B)(v); 37 CFR 1.217

When: Applicants have sixteen months from the earliest claimed priority under 35 U.S.C. to submit a redacted application for publication. See 37 CFR 1.217 and 35 U.S.C. 122(b).

Fee: No fees are collected through EFS. See comment below. A publication fee of $300 is due at the time of payment of the issue fee. If early publication of a redacted publication is requested, the $300 publication fee is due on filing.

Comment: Redacted publication is available only when an applicant has filed an application outside of the US with less content than was filed in the US.

To prevent publication of the full content as filed in the US by limiting publication to what will be published abroad, the applicant will file a redacted application. See 37 CFR 1.217(a). In addition to electronically filing the redacted publication information, applicant must submit, in paper, a copy of the application with the redacted information in brackets to indicate changes in the application on record. Applicant is also required to file, in paper, an unmarked copy of the redacted specification document for distribution to the public. See 37 CFR 1.217(c). A $130 fee and a certification that a less extensive foreign filing is the basis for foreign priority are associated with the paper copies rather than the EFS submission. See 37 CFR 1.217(d)(3). For more information regarding pre-grant publication please consult regulations 37 CFR § 1.211-1.221 for a full description of the process.

Note: In order to prevent replacement of the wrong specification with an EFS pre-grant publication submission, the USPTO is issuing confirmation numbers for each application number. Once an application is perfected (i.e. in condition for publication) a 4-digit confirmation number is generated and transmitted to the applicant. This confirmation number will be used in conjunction with the application number to identify pending applications.

Note: Please be sure to enter the correct application filing date as failure to do so will prevent publication.

Authoring Patent Application Specification

Specific use of each XML authoring tool (Patent Application Specification Authoring Tool (PASAT) or the WordPerfect TSA) is described in detail in the appropriate EFS Authoring Tool User Manual. Using either authoring tool you will create an electronic copy of the specification as required by 35 USC 112 and 113, including the claims and associated drawing figures. The same tool will create the patent specification for 18-month publication as required by 35 USC § 122(b). The output of this authoring process will be a structured, tagged electronic text document file with links to the figure image files or image files containing chemical or mathematical formulae.

Viewing

When the specification is formatted, it can be viewed using the USPTO standard XML style sheet in Internet Explorer 5.0 or higher. During the submission process the filer must certify that the documents you intend to submit have been reviewed. ePAVE allows the filer to view and/or print the specification, including drawings, and the forms (e.g. application transmittal) created using ePAVE.

Submission Folder

EFS submission client application (ePAVE) allows the user to create a submission folder that will contain all the electronic files to be sent to the USPTO as part of the electronic filing. For a redacted pre-grant publication filing, the authored XML tagged specification document, along with any linked image files are attached. ePAVE will automatically include the other XML document files you created, such as the application data sheet, fee transmittal, and transmittal document, in the submission folder.

Submission

After the specification is attached and other appropriate information has been entered, ePAVE will validate the contents to ensure that you have included certain attachments and information. No override of validation errors is permitted for pre-grant publication submissions.

The submit screen requires the filer to certify that the content of the submission has been reviewed.

The last two steps prior to submission allows the user to electronically sign the application transmittal and authenticate the digital certificate by providing the computer directory location of the filer's certificate profile and entering a password. **An individual authorized to file the application (e.g. attorney or agent) must make the electronic**

signature. A support staff member under direction and control of the attorney or agent may make the digital signature made using the digital certificate.

ePAVE will submit the patent application submission package via your Internet connection in encrypted and compressed form to ensure the security and integrity of the electronic submission. On receipt of the application, the USPTO will decrypt and decompress the file and send the filer an electronic receipt. This receipt includes the application number, date and time of receipt, name and size of files submitted and some patent application identifying information, such as the first-named inventor, the title of the invention, and the attorney docket number. The user can print this electronic postcard and maintain it as evidence of the time and date and content of the filing. ePAVE automatically saves the electronic receipt file in the submission folder on filer's computer.

Note: For more information regarding pre-grant publication please consult 37 CFR § 1.211-1.221 for a full description of the process. Ordinarily, the application as filed in either paper or by EFS-New Applications is used for the production of the patent application publication.

Scenario 7: Redacted Publication Submission after Initial Publication

Rule Basis: As for amended republication, 37 CFR 1.221(a)

When: Must be filed later than 16 months from the filing date

Fee: $300 for publication plus $130 for processing.

Comment: This scenario arises when applicant wants to republish a redacted application that has been amended. Applicant may want to publish some of the pending claims. A standard redacted publication will not be possible after the as-filed application has been published. For more information regarding pre-grant publication please consult regulations 37 CFR § 1.211-1.221 for a full description of the process.

Note: In order to prevent replacement of the wrong specification with an EFS pre-grant publication submission, the USPTO is issuing confirmation numbers for each application number. Once an application is perfected (i.e. in condition for publication) a 4-digit confirmation number is generated and transmitted to the applicant. This confirmation number will be used in conjunction with the application number to identify pending applications.

Note: Please be sure to enter the correct application filing date as failure to do so will prevent publication.

Authoring Patent Application Specification

Specific use of each XML authoring tool (Patent Application Specification Authoring Tool (PASAT) or the WordPerfect TSA) is described in detail in the appropriate EFS Authoring Tool User Manual. Using either authoring tool you will create an electronic copy of the specification as required by 35 USC 112 and 113, including the claims and associated drawing figures. The same tool will create the patent specification for 18-month publication as required by 35 USC § 122(b). The output of this authoring process will be a structured, tagged electronic text document file with links to the figure image files or image files containing chemical or mathematical formulae.

Viewing

When the specification is formatted, it can be viewed using the USPTO standard XML style sheet in Internet Explorer 5.0 or higher. During the submission process the filer must certify that the documents you intend to submit have been reviewed. ePAVE allows the filer to view and/or print the specification, including drawings, and the forms (e.g. fee transmittal and application transmittal) created using ePAVE.

Submission Folder

EFS submission client application (ePAVE) allows the user to create a submission folder that will contain all the electronic files to be sent to the USPTO as part of the electronic filing. For a redacted republication filing, the authored XML tagged specification document, along with any linked image files are attached. ePAVE will automatically include the other XML document files you created, such as the application data sheet, fee transmittal, and transmittal document, in the submission folder.

Submission

After the specification is attached and other appropriate information has been entered, ePAVE will validate the contents to ensure that you have included certain attachments and information. No validation override is available for pre-grant publication submissions.

The submit screen requires the filer to certify that the content of the submission has been reviewed.

The last two steps prior to submission allows the user to electronically sign the application transmittal and authenticate the digital certificate by providing the computer directory location of the filer's certificate profile and entering a password. **An individual authorized to file the application (e.g. attorney or agent) must make the electronic signature.** A support staff member under direction and control of the attorney or agent may make the digital signature made using the digital certificate.

ePAVE will submit the patent application submission package via your Internet connection in encrypted and compressed form to ensure the security and integrity of the electronic submission. On receipt of the application, the USPTO will decrypt and decompress the file and send the filer an electronic receipt. This receipt includes the application number, date and time of receipt, name and size of files submitted and some patent application identifying information, such as the first-named inventor, the title of the invention, and the attorney docket number. The user can print this electronic postcard and maintain it as evidence of the time and date and content of the filing. ePAVE automatically saves the electronic receipt file in the submission folder on filer's computer.

Note: For more information regarding pre-grant publication please consult 37 CFR § 1.211-1.221 for a full description of the process. Ordinarily, the application as filed in either paper or by EFS-New Applications is used for the production of the patent application publication.

Scenario 8: Corrected Publication Due to Error

Rule Basis: 37 CFR 1.221(a)

When: After initial publication

Fee: $300 for publication plus $130 for processing if the error arose through action by applicant. No fee if the error arose at USPTO.

Comment: This is a republication. Applicant may submit the most recent version of the pending claims with this publication. If the correction is necessary because of a serious error on the part of the USPTO, (i.e. affecting the scope of the claims) applicant must submit a paper copy to the USPTO within two months from the date of the error and provide an explanation about the error. No fee will be charged for this republication if it is necessitated by a material mistake on the part of the USPTO. See 37 CFR 1.221(b). For more information regarding pre-grant publication please consult regulations 37 CFR § 1.211-1.221 for a full description of the process.

Note: In order to prevent replacement of the wrong specification with an EFS pre-grant publication submission, the USPTO is issuing confirmation numbers for each application number. Once an application is perfected (i.e. in condition for publication) a 4-digit confirmation number is generated and transmitted to the applicant. This confirmation number will be used in conjunction with the application number to identify pending applications.

Note: Please be sure to enter the correct application filing date as failure to do so will prevent publication.

Authoring Patent Application Specification

Specific use of each XML authoring tool (Patent Application Specification Authoring Tool (PASAT) or the WordPerfect TSA) is described in detail in the appropriate EFS Authoring Tool User Manual. Using either authoring tool you will create an electronic copy of the specification as required by 35 USC 112 and 113, including the claims and associated drawing figures. The same tool will create the patent specification for 18-month publication as required by 35 USC § 122(b). The output of this authoring process will be a structured, tagged electronic text document file with links to the figure image files or image files containing chemical or mathematical formulae.

Viewing

When the specification is formatted, it can be viewed using the USPTO standard XML style sheet in Internet Explorer 5.0 or higher. During the submission process the filer

must certify that the documents have been reviewed. ePAVE allows the filer to view and/or print the specification, including drawings, and the forms (e.g. fee transmittal and application transmittal) created using ePAVE.

Submission Folder

EFS submission client application (ePAVE) allows the user to create a submission folder that will contain all the electronic files to be sent to the USPTO as part of the electronic filing. For corrected submissions the authored XML tagged specification document, along with any linked image files are attached. ePAVE will automatically include the other XML document files you created, such as the application data sheet, fee transmittal, and transmittal document, in the submission folder.

Submission

After the specification is attached and other appropriate information has been entered, ePAVE will validate the contents to ensure that you have included certain attachments and information. No validation override is available for pre-grant publication submissions.

The submit screen requires the filer to certify that the content of the submission has been reviewed.

The last two steps prior to submission allows the user to electronically sign the application transmittal and authenticate the digital certificate by providing the computer directory location of the filer's certificate profile and entering a password. **An individual authorized to file the application (e.g. attorney or agent) must make the electronic signature.** A support staff member under direction and control of the attorney or agent may make the digital signature made using the digital certificate.

ePAVE will submit the patent application submission package via your Internet connection in encrypted and compressed form to ensure the security and integrity of the electronic submission. On receipt of the application, the USPTO will decrypt and decompress the file and send the filer an electronic receipt. This receipt includes the application number, date and time of receipt, name and size of files submitted and some patent application identifying information, such as the first-named inventor, the title of the invention, and the attorney docket number. The user can print this electronic postcard and maintain it as evidence of the time and date and content of the filing. ePAVE automatically saves the electronic receipt file in the submission folder on filer's computer. **Note:** For more information regarding pre-grant publication please consult 37 CFR § 1.211-1.221 for a full description of the process. Ordinarily, the application as filed in either paper or by EFS-New Applications is used for the production of the patent application publication.

Scenario 9: Computer Readable Form Biotechnology Sequence Listing for Pending Paper Application

Rule Basis: 37 CFR § 1.821-1.825

When: For a pending application that requires a CRF sequence listing copy per 37 CFR § 1.821(e). 37 CFR § 1.821(e) requires nucleotide and/or amino acid sequence disclosures in patent application to include a copy of the Sequence Listing to be submitted in CRF in accordance with the requirements of 37 CFR 1.824. The CRF is a copy of the Sequence Listing and will not necessarily be retained as part of the patent application file.

Fee: Pay fees due by submitting a fee transmittal in paper to the USPTO.

Comment: Voluntary use for pending paper applications.

CRF biosequence listing can be created using the USPTO sequence listing authoring tool, PatentIn or any other biosequence creation tool or editor. The authoring tool used must produce an acceptable text file as defined in the Manual of Patent Examining Procedures.

The use of PatentIn program is not required for compliance with the sequence rules, but its use is highly recommended as USPTO experience has shown that submissions developed with PatentIn are far less likely to include errors than those developed without the program. The PatentIn file format can be submitted using ePAVE.

In ePAVE a sequence transmittal is prepared and accompanies the electronically filed sequence listing. Upon receipt at USPTO the sequence listings are automatically forwarded to the Automated Biosequence Search System.

Note: In order to prevent replacement of the wrong specification with an EFS pre-grant publication submission, the USPTO is issuing confirmation numbers for each application number. Once an application is perfected (i.e. in condition for publication) a 4-digit confirmation number is generated and transmitted to the applicant. This confirmation number will be used in conjunction with the application number to identify pending applications.

Note: Please be sure to enter the correct application filing date as failure to do so can create problems.

Submission Folder

EFS submission client application (ePAVE) allows the user to create a submission folder that will contain all the electronic files to be sent to the USPTO as part of this type of electronic filing. For a CRF biosequence filing ePAVE will automatically include the other XML document files you created, such as the biosequence transmittal, and

transmittal document, in the submission folder. You will attach the text file containing the biosequence listing as part of the submission folder at the ePAVE Attachment tab.

Submission

After the text file and biosequence transmittal are attached and other appropriate information has been entered, ePAVE will validate the contents to ensure that you have included the necessary information.

The submit screen requires the filer to certify that the content of the submission has been reviewed.

The last two steps prior to submission allows the user to electronically sign the application transmittal and authenticate the digital certificate by providing the computer directory location of the filer's certificate profile and entering a password. **An individual authorized to file the application (e.g. attorney or agent) must make the electronic signature.** A support staff member under direction and control of the attorney or agent may make the digital signature made using the digital certificate.

ePAVE will submit the patent application submission package via your Internet connection in encrypted and compressed form to ensure the security and integrity of the electronic submission. On receipt of the application, the USPTO will decrypt and decompress the file and send the filer an electronic receipt. This receipt includes the application number, date and time of receipt, name and size of files submitted and some patent application identifying information, such as the first-named inventor, the title of the invention, and the attorney docket number. The user can print this electronic postcard and maintain it as evidence of the time and date and content of the filing. ePAVE automatically saves the electronic receipt file in the submission folder on filer's computer. Electronically filed biosequence listings are automatically transferred to the Automated Biosequence Search System and checked for compliance. The filer is then notified by regular mail if the sequence was acceptable. Scenario 10: Filing an Assignment Recordation for a Previously Filed Patent Application Using EFS

Rule Basis: 35 U.S.C. 261; 37 CFR 1.21, 37 CFR Chapter 3.

When: For previously filed patent applications and patents.

Fee: $40.00 per coversheet per property.

Comment: Voluntary use for previously filed applications and patents.

37 CFR 3.1 defines an assignment as "a transfer by a party of all or part of its right, title and interest in a patent or patent application, or a transfer of its entire right, title and interest in a registered mark or a mark for which an application to register has been filed." EFS only accepts assignments for patents, patent applications, and PCT applications at this time.

For an assignment for a patent or patent application to be recorded at USPTO it must include a completed cover sheet per 37 CFR 3.28 and 3.31 and an assignment conveyance document.

To file a new assignment document using EFS the user will need to scan the assignment conveyance documents and save them as TIFF images. The TIFF images should be black and white, CCITT Group 4 compression, and 300 dpi. Using ePAVE, the user will create XML tagged cover sheet(s). An EFS submission of assignment for previously filed patent applications, patents, and PCT applications will include a transmittal, a fee form, at least one assignment coversheet, and the assignment TIFF images. The coversheet may refer to up to 999 properties. Up to 15 coversheets may be included in each submission. Each coversheet will refer to from 1 to 5 conveyance document TIFF images. If the method of delivery selected is Fax and the submission is proper for recordation, a notice of recordation and a copy of the coversheet will automatically be faxed to the filer.

ADDITIONAL INFORMATION

User Manuals

EFS Manuals are available for PASAT, WordPerfect TSA, and ePAVE. They provide detailed information to help your EFS process run smoothly. You may download EFS user manuals from the EFS Web site at http://www.uspto.gov/. The files are in Adobe Acrobat Portable Document Format (PDF). This file format is printer friendly and will print on any printer.

PASAT Authoring Manual

The PASAT Manual provides detailed information and instructions on how to use the USPTO Word Authoring Tool, PASAT. The authoring tool allows you to author your patent application specification document as an XML tagged document. The PASAT Authoring Manual covers the installation process, interface features, creating and editing specifications, validation, and exporting specifications as XML files.

WordPerfect Template for Specification Authoring (TSA) Manual

The WordPerfect TSA Manual explains the authoring process when using the WordPerfect TSA provided by the USPTO. The WordPerfect TSA Manual outlines the installation process, authoring a specification, troubleshooting, terms and definitions.

ePAVE Submissions Manual

The ePAVE Submissions Manual provides information on how to author other related application information and how to submit applications through EFS. Currently, ePAVE is the only submission tool available for EFS. The Submissions Manual details the installation process, security, instructions for filing sequence listings, filing new utility patent applications, pre-grant publication submissions, provisional applications, and assignments, how to save and print, and information about the acknowledgement of receipt.

EFS Overview CD

The EFS Instructional Video “EFS Overview CD” demonstrates the basic EFS process and provides step-by-step instructions. To learn more about USPTO’s Electronic Filing System (EFS), contact the Electronic Business Center Customer Support staff at (703) 305-3028 or send a request with your name and address to the EBC Customer Support Staff at efs@uspto.gov.

ADDITIONAL SUPPORT

The EFS software and user guides as well as system notices are available at the EFS web site that you can access from http://www.uspto.gov/ (click on the EFS logo tab at the right top of the USPTO home page).

Customer Support Center

Should you require assistance in using EFS software, please contact the Electronic Business Center Customer Support staff at (703) 305-3028 or send an inquiry with your name and description of the problem or question to the EBC Customer Support Staff at efs@uspto.gov.

CASE STUDY FOR A NEW UTILITY APPLICATION

Overview

The following is an in depth look at the process behind filing a New Utility Application. It *is not* intended as a how-to for the authoring (PASAT or TSA) or transmitting (ePAVE) tools. For additional information on PASAT, TSA, or ePAVE, see their respective manuals. It *is* intended to detail the steps prior to and during authoring the patent application specification document, creating the necessary transmittal forms and coversheets, and transmitting electronically all developed documents.

Background

A group of workers at the University of California at Los Alamos National Laboratory developed a device for detecting nitrogen dioxide. The group, consists of Dipen N. Sinha, Stephen F. Agnew, and William H. Christensen. They seek to patent their device.

Richard J. Cordovano is a patent attorney and is handling the matter for them. He worked with the inventors as they developed the necessary documents and drawings he needs to file the application.

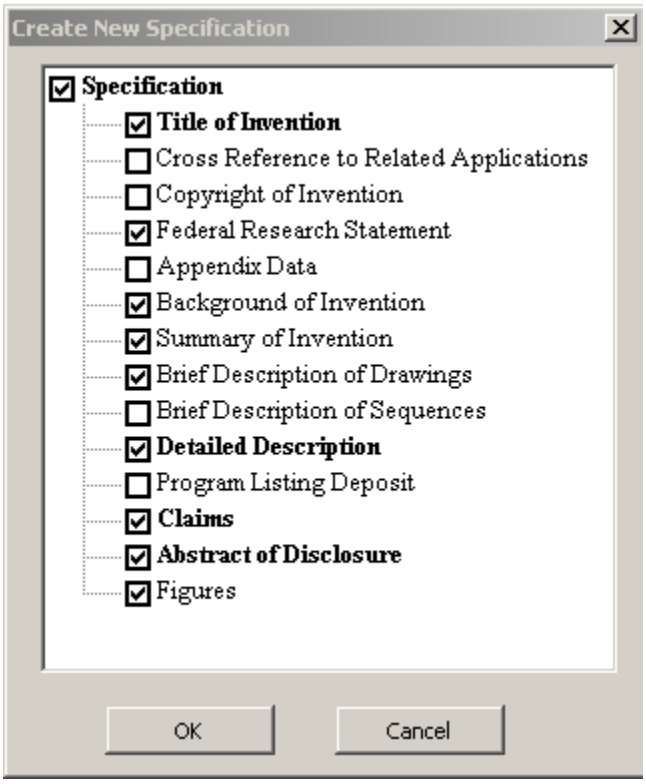
Preparation for Authoring the Patent Application Specification Document

Before authoring the patent application specification document, the filer (the attorney in this case) has already installed the necessary software, and obtained a customer number and digital certificate from the USPTO. The digital certificate is required and ensures secure and confidential transmission of the application and associated forms to the USPTOsystem.

The filer also reformatted the necessary documents to Arial (alternately, CG Times or Times New Roman) font since he will cut-and-paste information into the specification document he will create in PASAT (or TSA), and prepared the necessary scans in the proper format (black and white TIFF images at 300 dpi with CCITT Group 4 compression). For this document, the filer has scanned in four figures and one complex chemical equation.

Authoring the Patent Application Specification Document

With the source document open, the filer launches PASAT and opens a new utility application template. Prior to the empty template appearing, a window displays the various sections that he will have to fill out for this specification. The sections in bold, like Abstract of Disclosure, are required for this specification, whereas the Figures section isn't required. Looking at the list, the filer selects the required sections and the optional Figures section he needs and clicks **OK**.



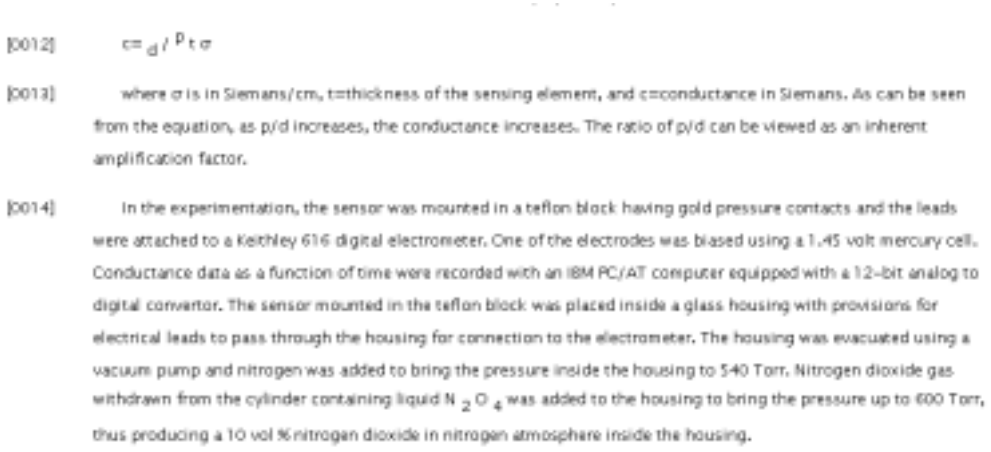
A blank template appears along with the Office Assistant that will help him in preparing the specification. The filer copies the title from his source document, then displays his specification document. After placing the cursor at the appropriate spot, he pastes the title into the specification.

The filer does this for the various sections he is required to include as well as those optional sections he chooses to include.

At various points in the process of creating the patent application specification, the filer saves his document-in-progress, saving it in the .s4w format in the same folder as his source documents and scans. The file location is for convenience, should he have to come back to the document at a later time (if he realized after he started that he was missing a piece of information or a scan, he could save his work and not have to start all over again

later). The .s4w format facilitates the easy translation of the document into the final .xml format that will be sent to the USPTO.

While entering data for the Detailed Description section, he sees a special scientific character. By placing the cursor in the specification document where he wants the symbol to appear, the filer doesn't copy-and-paste, but uses the Office Assistant. After looking for the symbol in a table listing, he selects the symbol, clicks Insert and it appears in the specification document.



[0012] $c = {}_{d} / {}^{p} t \sigma$

[0013] where σ is in Siemans/cm, t=thickness of the sensing element, and c=conductance in Siemans. As can be seen from the equation, as p/d increases, the conductance increases. The ratio of p/d can be viewed as an inherent amplification factor.

[0014] In the experimentation, the sensor was mounted in a teflon block having gold pressure contacts and the leads were attached to a Keithley 616 digital electrometer. One of the electrodes was biased using a 1.45 volt mercury cell. Conductance data as a function of time were recorded with an IBM PC/AT computer equipped with a 12-bit analog to digital convertor. The sensor mounted in the teflon block was placed inside a glass housing with provisions for electrical leads to pass through the housing for connection to the electrometer. The housing was evacuated using a vacuum pump and nitrogen was added to bring the pressure inside the housing to 540 Torr. Nitrogen dioxide gas withdrawn from the cylinder containing liquid N_2O_4 was added to the housing to bring the pressure up to 600 Torr, thus producing a 10 vol % nitrogen dioxide in nitrogen atmosphere inside the housing.

Later, while copying another paragraph into the specification document, he accidentally tries to copy and paste a special character that could not be converted. After pasting the paragraph into the specification, he sees in large red type: **Unknown Symbol**. After seeing this he highlights the **Unknown Symbol** text and again uses the Office Assistant to help him place the proper character into the specification document.

These large red call-outs make it easy for him to be assured that he's not missing any valuable data in the specification document and saves him the time of having to look at every character looking for special symbols.

Towards the end of the Detailed Description section, the filer comes across a complex chemistry equation. Prior to beginning to create the specification document, this equation was identified as being too complex to copy-and-paste, so a scan was created for this equation.

Placing his cursor where the equation is to appear, the filer uses the Office Assistant to help. The Office Assistant opens a dialogue box for him to locate the scan and after highlighting the correct file and clicking the **OK** button, places the image in the specification document.

The Claims section works like the others with the filer copying and pasting information from his source document into the specification. One addition to the usual procedure is

that he uses the Office Assistant to distinguish between claims. He also types some new claims directly into the document. After typing the first claim text or section of the first claim, the filer uses the Office Assistant to create a new claim text for the second section of the claim. After typing the second section, he uses the Office Assistant to create another claim

[c4]

4. The apparatus of claim 3 further including means for converting said conductance or resistance value to an amount of nitrogen dioxide present in said gas.

[c5]

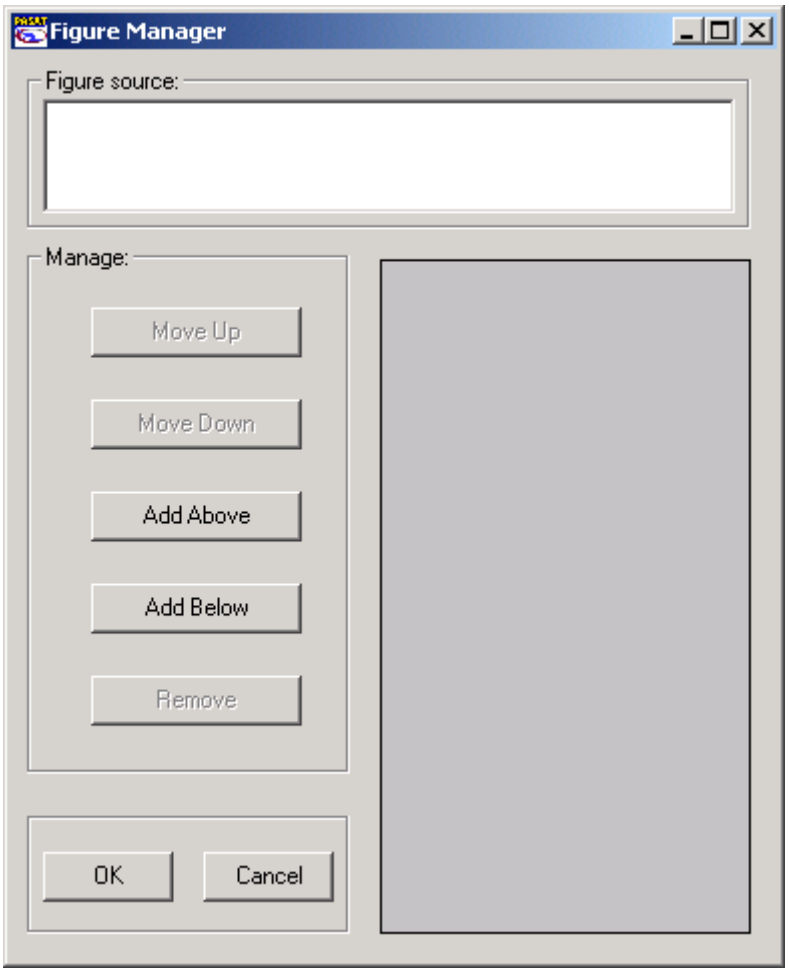
5. The apparatus of claim 3 where said electrodes are interdigitated electrodes and are encapsulated in polystyrene.

[c6]

6. The apparatus of claim 3 where said electrodes are interdigitated electrodes disposed on an inert substrate and polystyrene is deposited on said substrate between fingers of said electrodes.

The last section to be completed is adding the figures.

With the Office Assistant, the filer opens the Figure Manager window to link his scans to this document.



The Figures window allows him to add (and remove) images, arrange the order, and even view a small version of the image (this aids in verifying the image file name to the image itself).

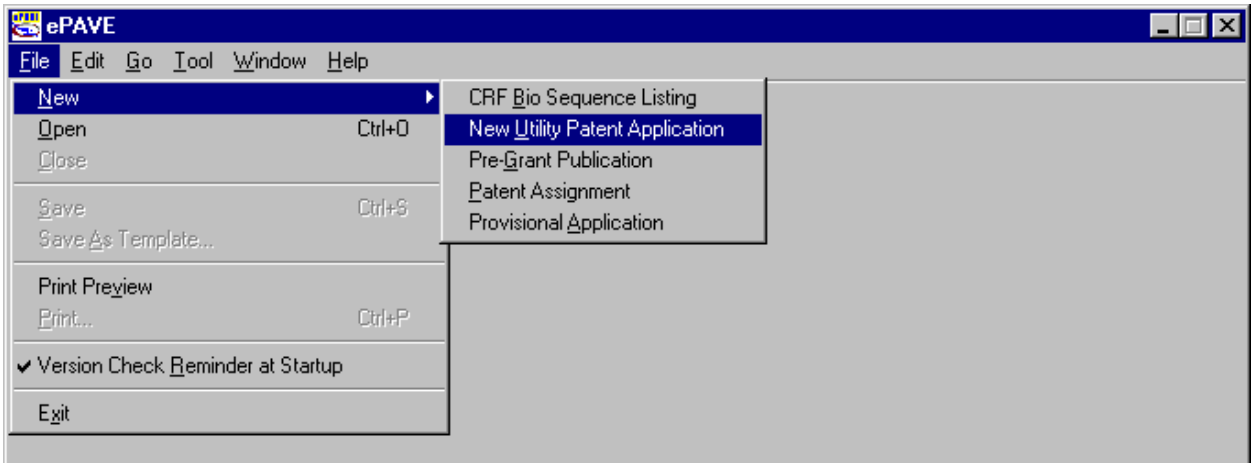
Once all the sections are complete, the filer saves the document one last time and then exports it as an .xml file. The authoring tool (PASAT or TSA) does all the converting work for him, resulting in the .xml file that will be sent to the USPTO. After saving the converted file, the filer views the .xml file in PASAT. This opens his copy of Internet Explorer 5.0 and displays the file as it will be seen at the USPTO and allows him to view his work and verify the attached scans at actual size.

The last step the filer does is use the **Save As** option to save the application specification as a .doc file. This version of the file can be archived, or used to send to other parties without those recipients having to install the PASAT software.

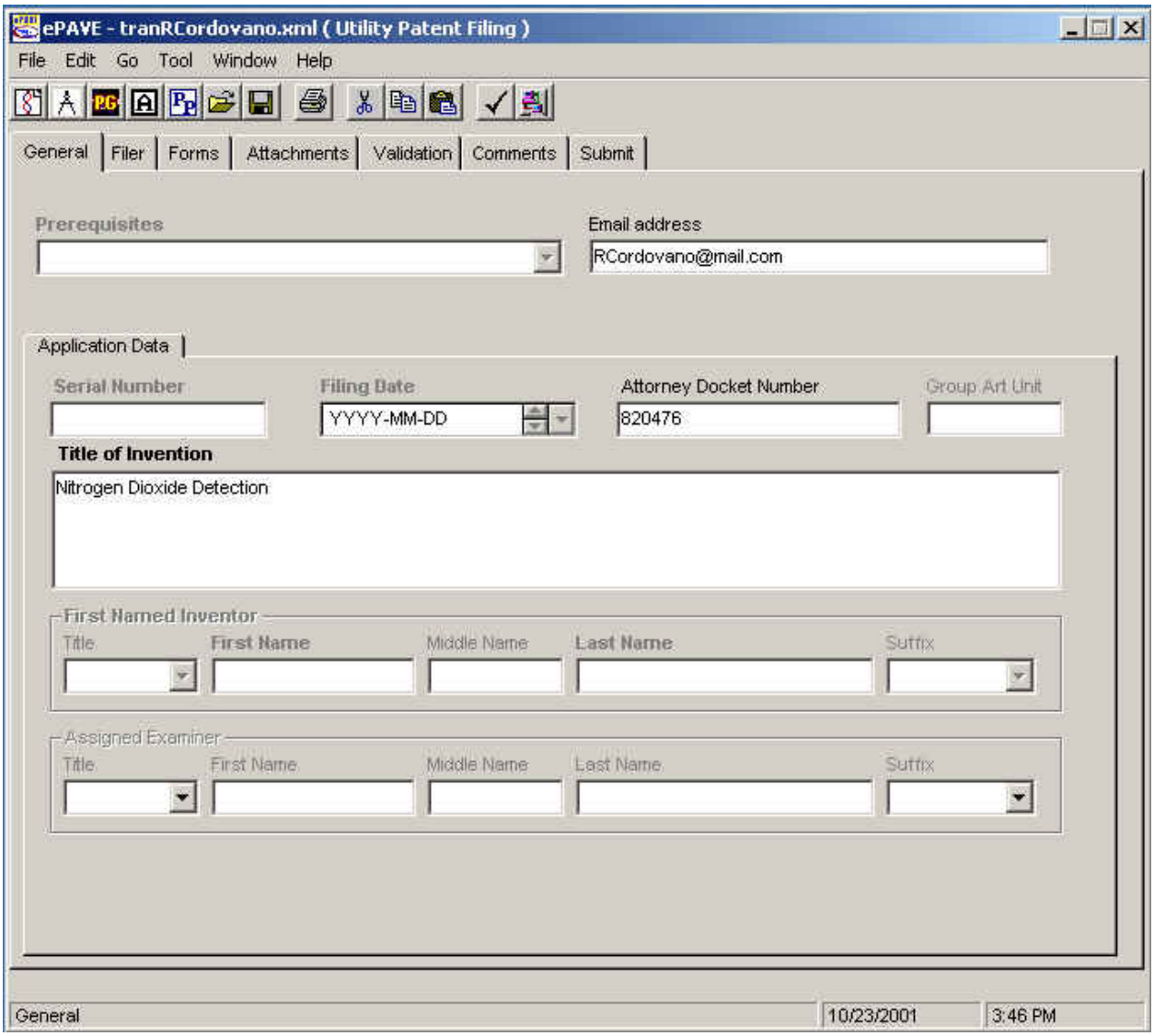
Creating Necessary Transmittals and the Coversheet

With the specification document complete, the filer works on the other necessary forms, such as the fee transmittal, application data sheet, and assignment coversheet. All of these forms are developed using the ePAVE application.

The filer launches the application and selects a **New Utility Patent Application** from the **File** menu.

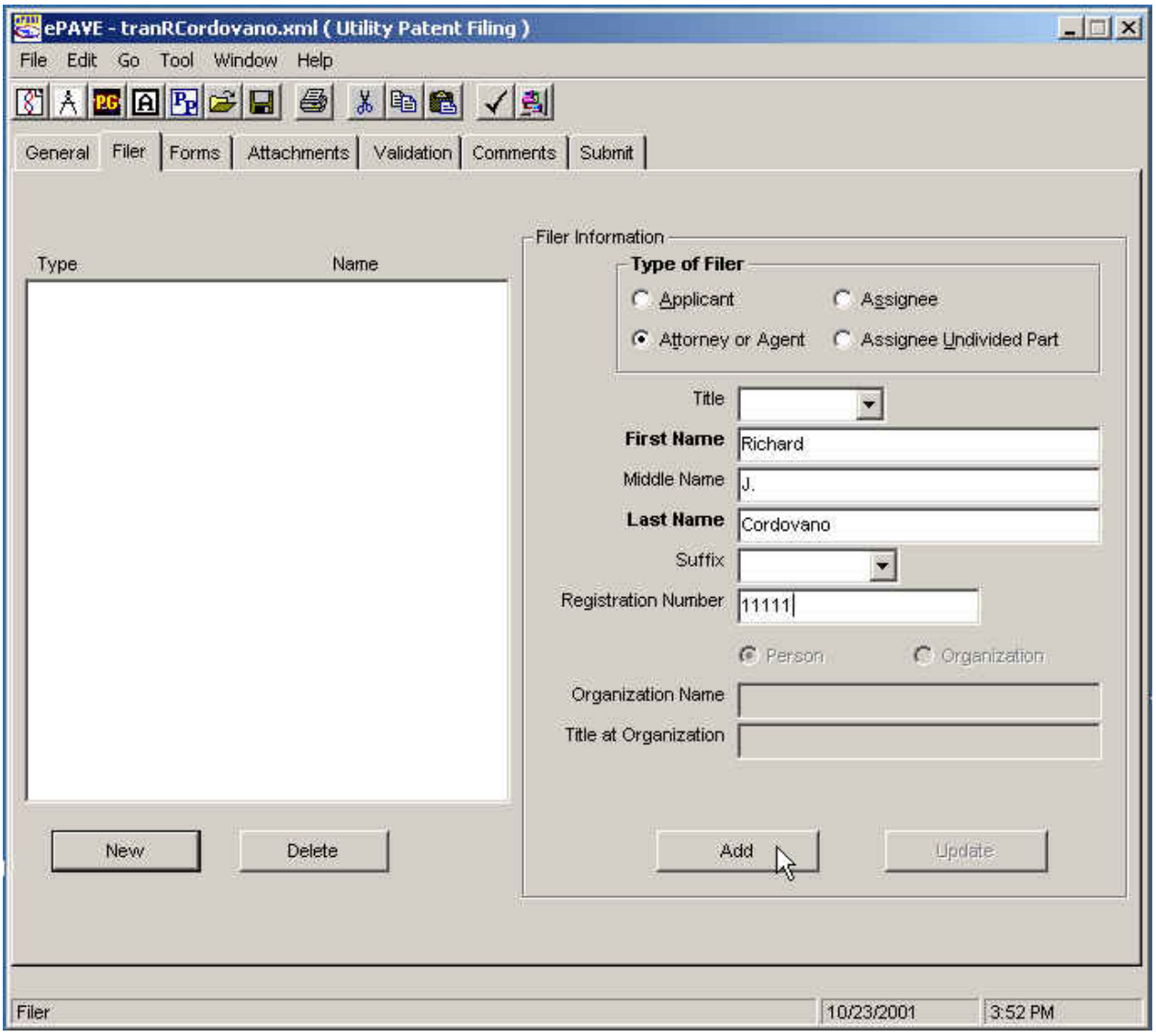


Then he picks a location and creates a folder where the files developed in ePAVE will be stored. The ePAVE window then displays the **General** tab and other tabs where the filer will enter information.



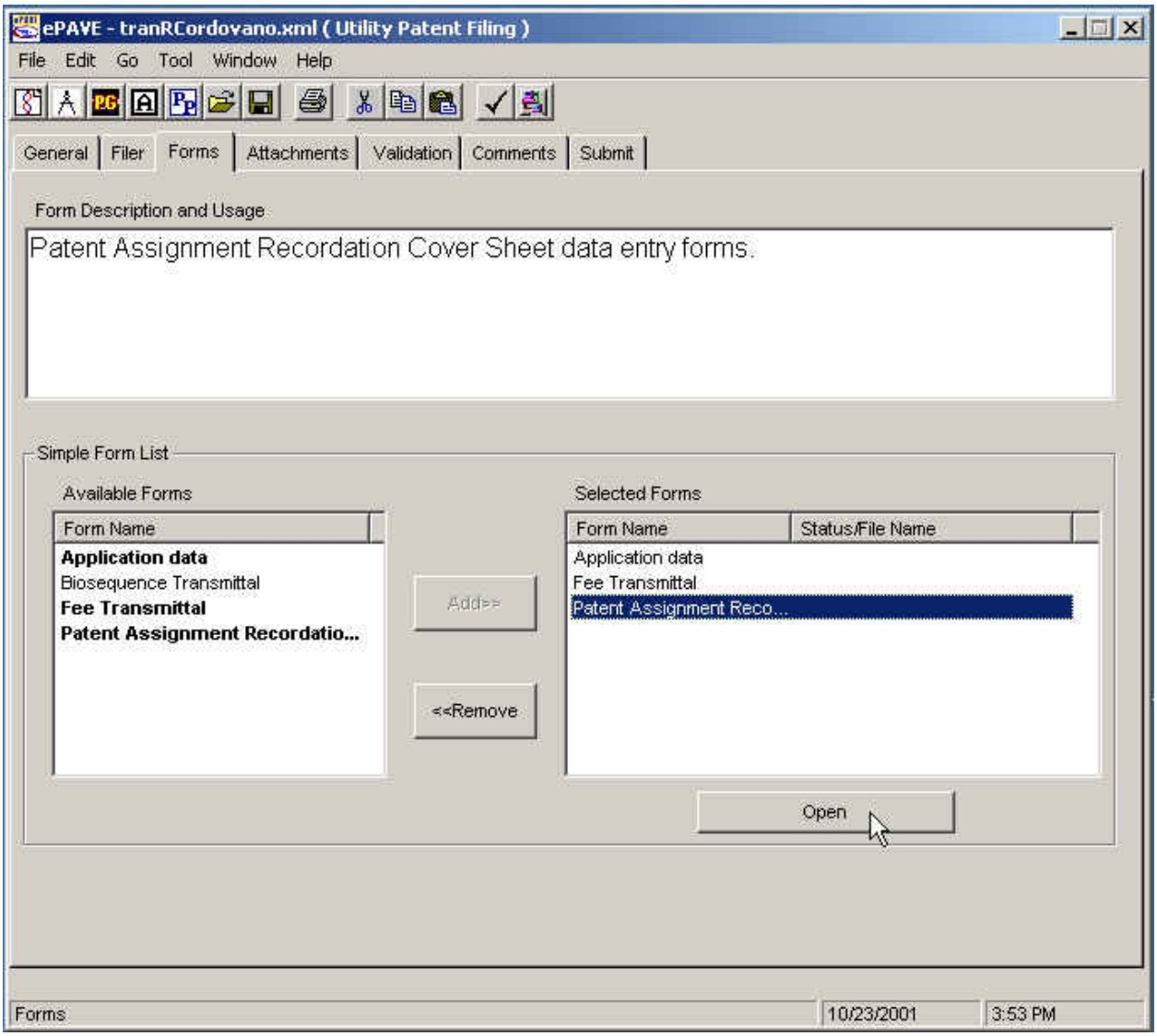
As he goes through the various tabs, grayed out fields (such as Prerequisites shown above) do not apply to a new utility filing or are not filed in by the user (such as Filing Date shown above).

In the **General** tab, the only fields he can enter information into are the Email address, Attorney Docket Number, and Title of Invention. After entering that information he clicks on the **Filer** tab.



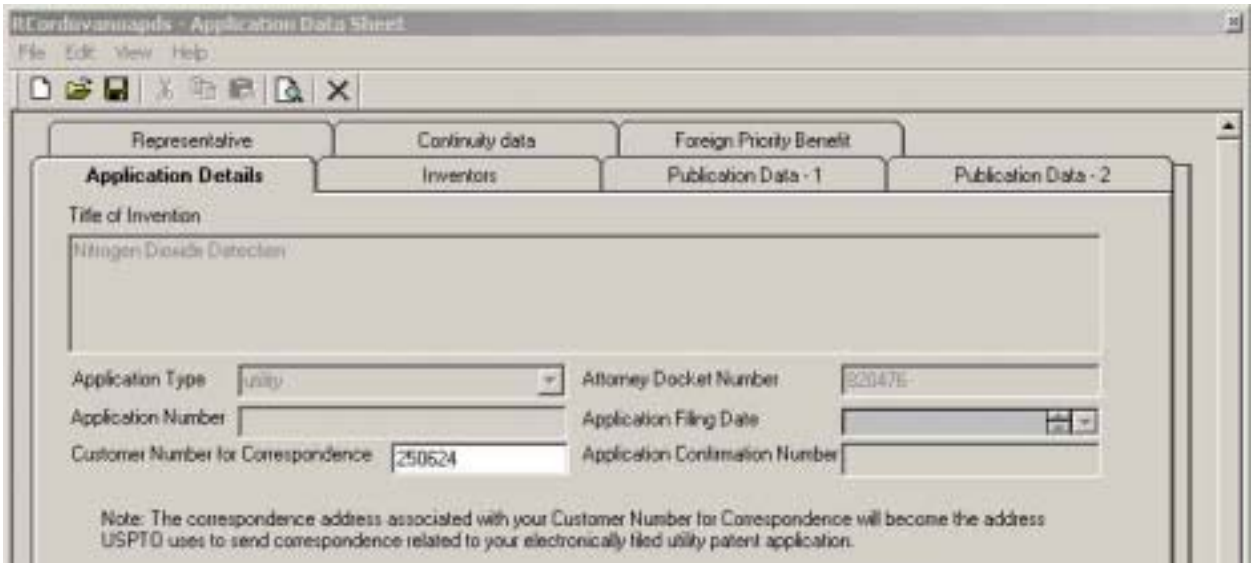
In the **Filer** tab, he enters Richard and Cordovano in the appropriate First Name and Last Name fields. After clicking the **Add** button at the bottom of the right hand side of the window, he sees the formation in the left hand side of the window.

After filling this out, he clicks on the **Forms** tab which displays the forms he must include and optional forms he may choose to include if the particular filing calls for it.



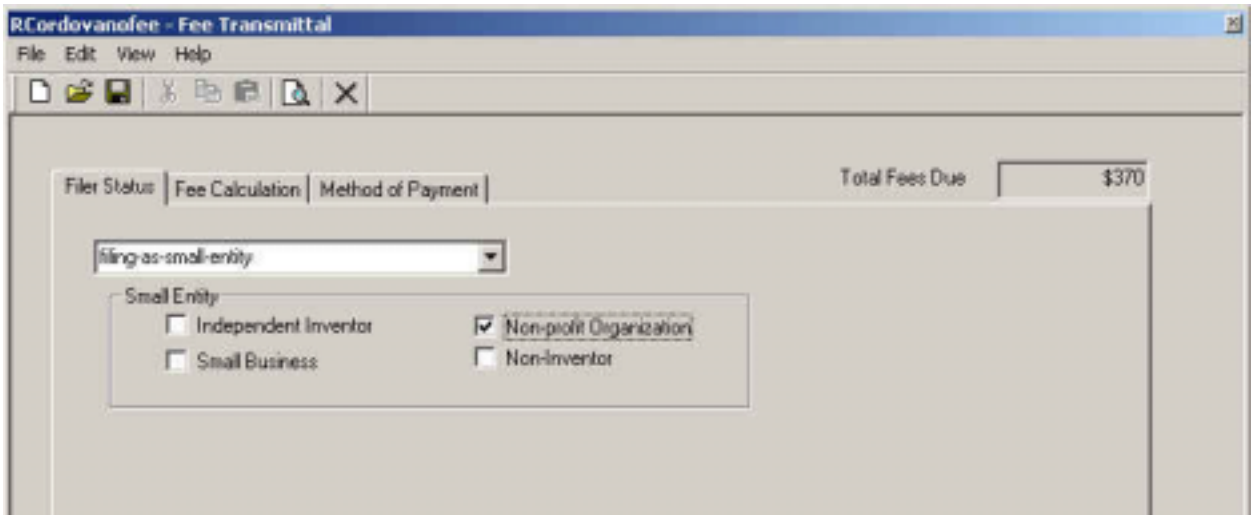
Since the filer is filing a new utility patent, the **Fee Transmittal** and **Application data** forms are required and already appear in the Selected Forms list. He also elects to fill out a **Patent Assignment Recordation** Form by clicking on it in the Available Forms field and clicking the **Add>>** button. He sees the form now appearing in the Selected Forms field.

The filer opens the Application data form and the window displays a series of tabs for the various parts of that form.



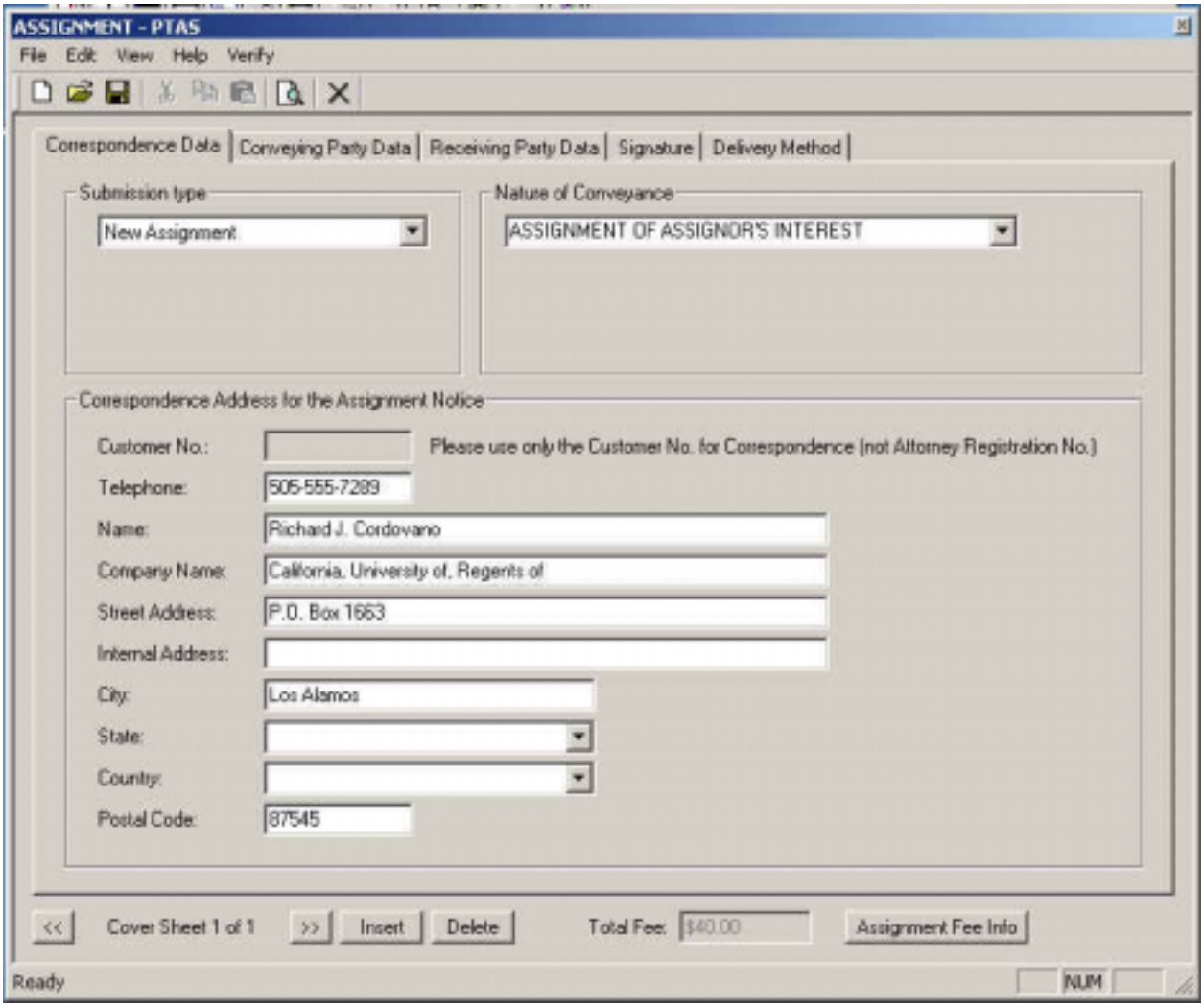
The filer enters information into fields of the **Application Details** (such as the type of application), **Inventors** (listing the names of all three inventors), **Publication Data - 1** (if and when the patent will be published), **Representative** (his name), **Continuity data** (no continuity data for this application) and **Foreign Priority Benefit** (not applicable here) tabs, saves the application data sheet, and returns to the **Forms** tab.

He then opens the **Fee Transmittal** form to indicate the filing status, determine the fees duet, and entering the method of payment. The window changes to display three tabs for the parts of the Fee Transmittal form.



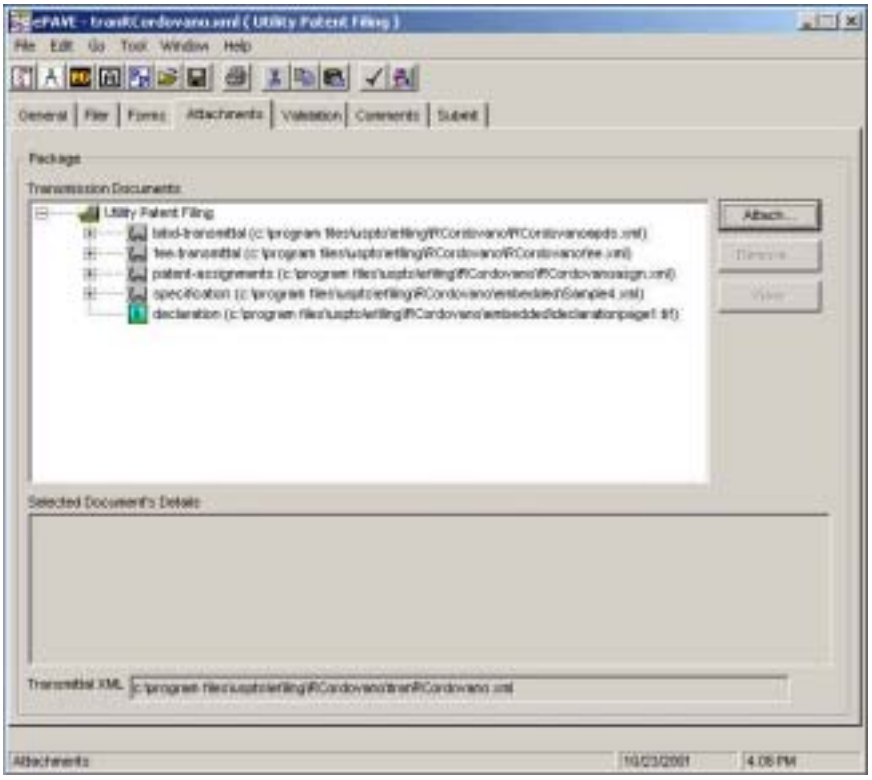
Just like the Application data tabs, the filer fills out the **Filer Status**, **Fee Calculation**, and **Method of Payment** tabs to determine the cost of filing and selecting how it will be paid. The Total Fees Due field (on the top right hand side of the window) displays the current cost of filing and changes as the filer adds or alters information in relevant fields. He then saves the Fee form and returns to the **Forms** tab.

Finally, he opens the **Patent Assignment Recordation** form and the window changes to display tabs for the parts of that form.



Working through the tabs, the filer fills out the necessary information for the **Correspondence Data**, **Conveying Party Data**, **Receiving Party Data**, **Signature**, and **Delivery Method** tabs. After saving the **Assignment Recordation** form, the filer returns

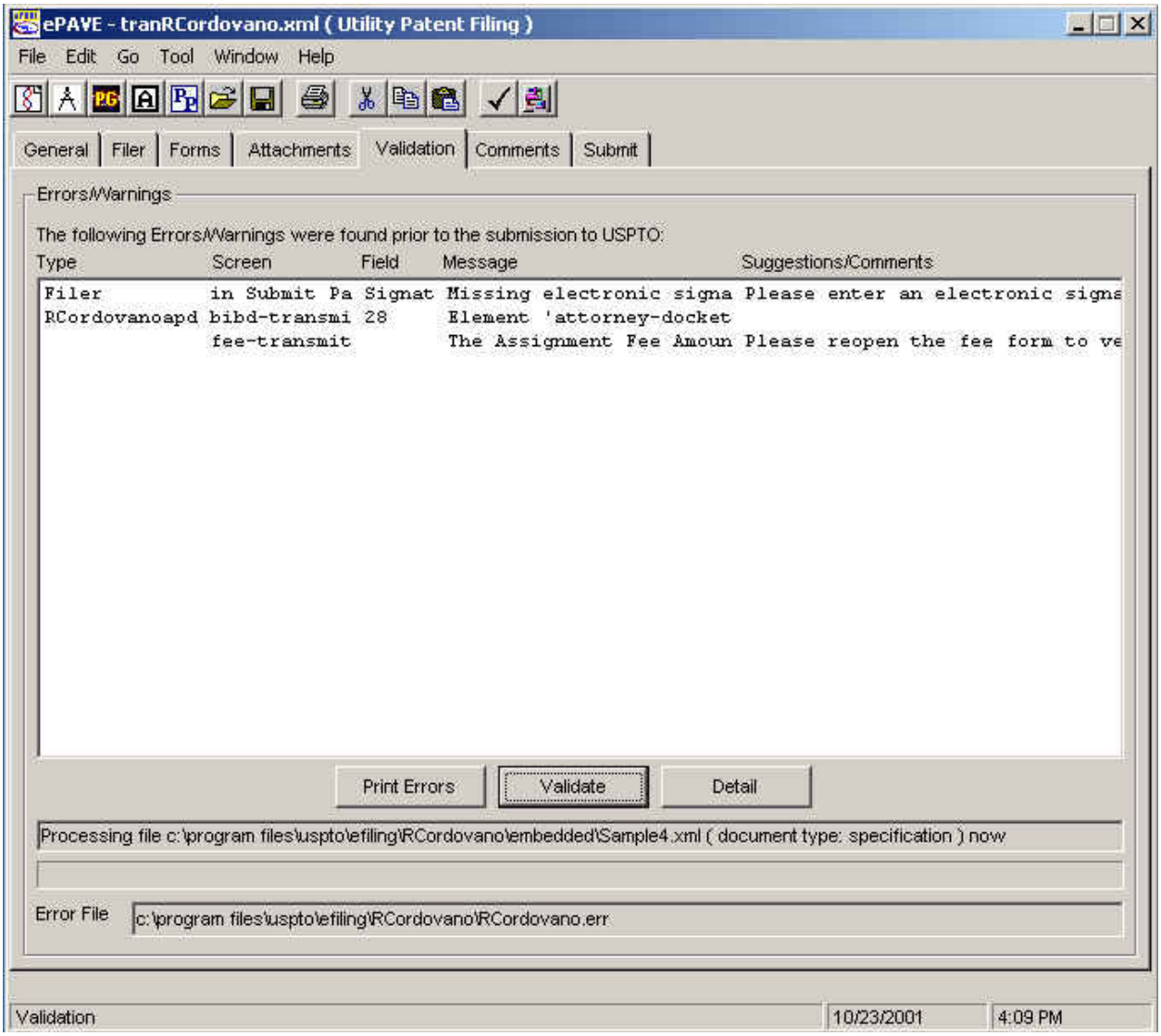
to the **Forms** tab. Since he has filled out the two required forms and the one optional form, he continues by clicking on the **Attachments** tab.



The **Attachments** tab is where the filer attaches the .xml specification document that was exported from the .s4w file that he created in PASAT. He clicks on the **Attach...** button on the right hand side of the window, and then from the dialogue box that appears, navigates to the location of the .xml specification file.

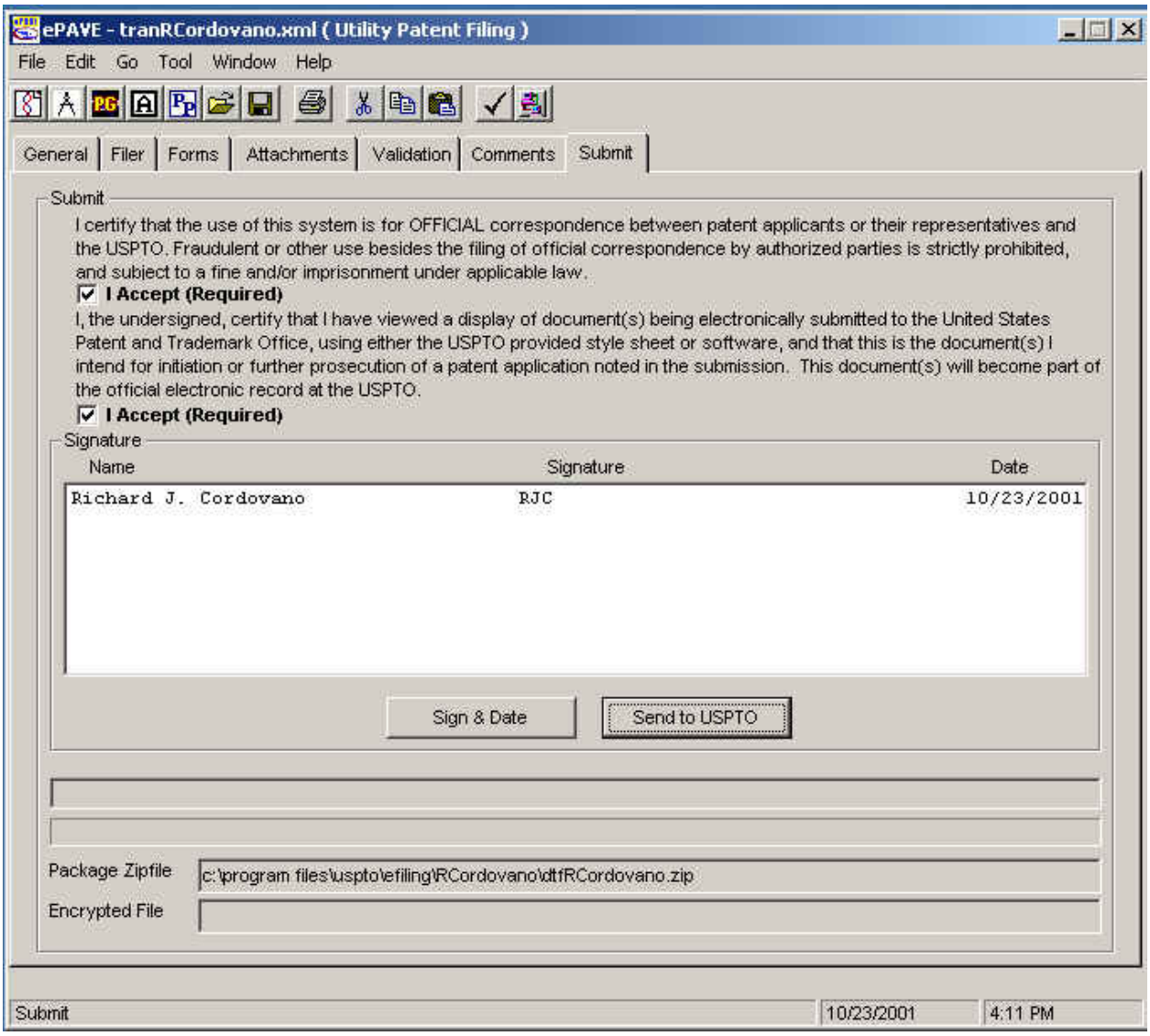
This tab also allows him to view and remove any of the attachments listed, useful if he accidentally attached the wrong specification file.

The **Validation** tab allows the filer to check his forms for completeness prior to transmitting to the USPTO system.



Any possible errors or warnings are listed and can be printed or selected and viewed in greater detail. After looking over the results of the **Validation** tab, the filer amends key fields and revalidates his work. The second time the field is blank, indicating an error-free submission.

Since the filer has no additional comments to add to this submission, he skips the **Comments** tab and proceeds to the **Submit** tab to transmit to the USPTO his package of .xml forms he created in ePAVE and the specification he exported from the document he created in PASAT.



In the **Submit** tab, the filer clicks the two required check boxes as a sign of agreement to the two statements. He then electronically signs and dates the submission with the dialogue box that appears after clicking on the **Sign & Date** button. Once that's done, he clicks the **Send to USPTO** button to begin transmitting his files.

Before transmission begins, the Entrust Profile Login window appears:

This window facilitates the encryption of the submission as it is transmitted to the USPTO system. It is based on the Entrust profile and password designated when the filer created his digital certificate using the USPTO Direct security software. After clicking **OK**, the files are transmitted.

When transmission is complete, the server returns an acknowledgement receipt to the filer. The receipt is saved in the same folder that was created for this particular submission.

Acknowledgement Receipt

Application Number: 09/500,040
First Named Inventor: Jane Smith
Title of Invention: Pat on the Back Apparatus
Attorney Docket Number: a333
File Listing:
Stealth04fee.xml 4661 Bytes
e-feetra.dtd 35233 Bytes
e-feetra.xml 13699 Bytes
Specification.xml 54589 Bytes
u-specif.dtd 103876 Bytes
u-specif.xml 25417 Bytes
ToneFig1.tif 306732 Bytes
ToneFig3.tif 346716 Bytes
ToneFig2.tif 379600 Bytes
ToneFig4.tif 299934 Bytes
ToneFig5.tif 304884 Bytes
ToneFig6.tif 260354 Bytes
ToneFig7.tif 367608 Bytes
Declaration.tif 982788 Bytes
Stealth04\Stealth04.xml 5905 Bytes
Stealth04.cfm 2665 Bytes
EFS ID: 5944670024S7
Filesize: 2618O9
Timestamp: Wed Dec 8 16:20:30 EST 1999
Message Digest: hhcx2130kNGM5NgyhFx12A
Digital Certificate Holder Name: cn=Diane Lewis Test, ou=Registered Attorneys
Upload Status: You have successfully uploaded your submission to USPTO.

The receipt includes, among other things, a unique EFS ID number, a Timestamp of the date and time of receipt at USPTO, and lastly, the Upload Status, which confirms that the submission was successfully uploaded to USPTO. The filer prints out the receipt for his records.